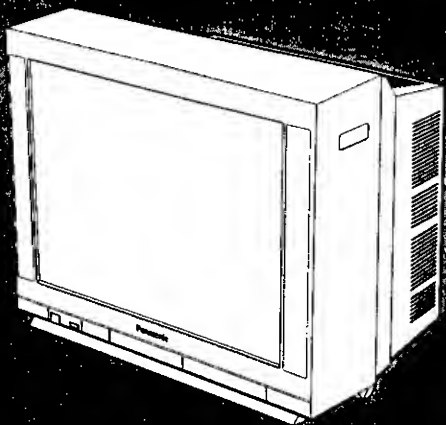


Panasonic

Colour Television Operating Instructions

TX-29P100 Series
TC-29P100 Series
TX-33P100 Series
TC-33P100 Series
TX-68P100 Series
TX-79P100 Series



[tau]
FLAT
DIGITAL

This is a combined Operating
Instruction manual for all the
above series of models.

Please read these instructions
before operating your set and
retain them for future reference.

TQBC0110

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new colour television set.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and note down the Model Number and Serial Number of your set in the space provided on the rear cover of these Instructions.

Table of Contents

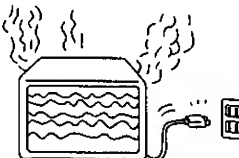
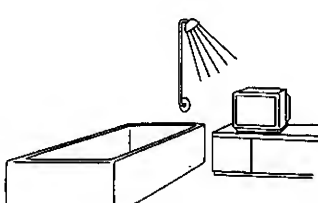
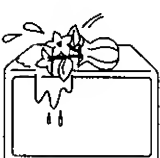
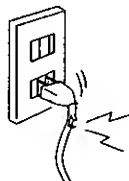
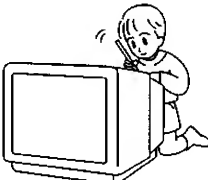
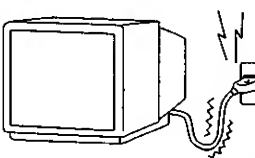
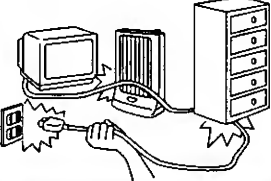
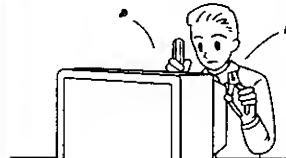
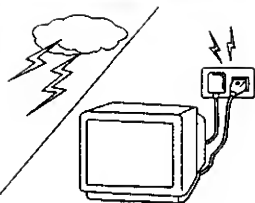
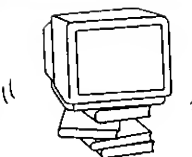
Warnings and Cautions	4
Preparation	6
Before Operating This Set	8 ~ 11
Connecting the Aerial Cable to RF in the Terminal	8
Connecting the plug to the wall outlet	9
How to Turn the Power On	9
Battery Installation	10
Geomagnetism Correction	11

Table of Contents

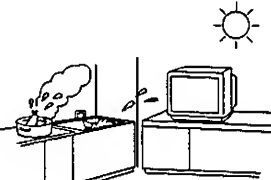
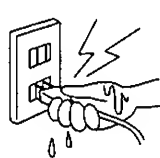
Location of Controls	12 ~ 14
Connections	15 ~ 19
Flow Chart of Main Menu	20
Tuning Procedure	22 ~ 33
Channel Selection	22
Country System Selection	24
Automatic Tune	26
Manual Tune	28
Fine Tuning	30
How to Cancel the Fine Tuning Function	31
Programme Number Skip	32
How to Cancel the Skip Function	33
General Operation	34 ~ 37
How to switch the ON or OFF/Stand-By Mode	34
Programme Number Selection	34
Direct Programme Number Selection	34
Volume Adjustment	34
TV/AV Mode Selection	35
TV/AV/RGB Mode Selection	35
RGB Mode Selection	35
Display Button	35
Mute Button	35
Recall Button	35
Off Timer Button	35
Sound System Selection	36
Colour System Selection	37
Advanced Remote Control Operation	38 ~ 43
PICTURE IN PICTURE Operation (TC-29P100R is not equipped)	38
STROBE CH SEARCH and STILL Operation	40
P.AI and D.PNR Operation	41
Surround Operation	42
Stereo Reception (TC-29P100R is not equipped)	43
Main Menu Operation	44 ~ 51
Picture Menu Operation	44
Sound Menu Operation	45
Features Menu Operation	46
Language Menu Operation	49
SCREEN Menu Operation	50
Multi PIP Menu Operation	52
Teletext Operation (For TX-29/33P100 series, TX-68/79P100 series)	54 ~ 57
Operation of the VCR/LD/DVD	57 ~ 59
Troubleshooting	60
Specifications	62 ~ 63

Warnings and Cautions

⚠ Warnings

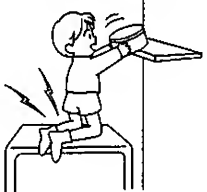
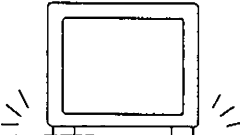
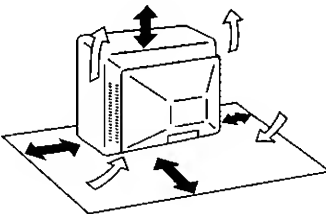

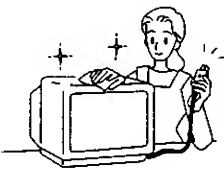
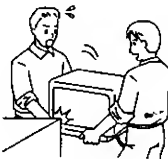
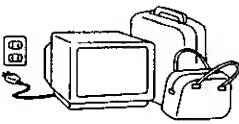
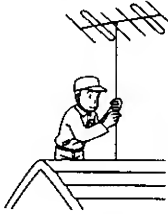
	<p>Unplug the power cord in the event of any malfunction (screen goes blank, no sound, odd sounds, smoke or unusual odors coming from the unit). Unplug the power cord if foreign matter or water falls into the unit, or if the unit is dropped or the cabinet is damaged.</p>		<p>DO NOT use this unit near water. (near a bath tub, etc.)</p>
	<p>DO NOT place any of the following on the unit: Flower vases, flower pots, cups, small metal objects, or cosmetics containers, chemicals or water.</p>		<p>DO NOT use if the power cord or power plug is damaged, or if the plug does not fit tightly into the socket.</p>
	<p>DO NOT insert foreign objects (metal or easily flammable objects).</p>		<p>DO NOT use at a voltage other than indicated</p>
	<p>TAKE CARE NOT to damage the power cord.</p>		<p>DO NOT remove the rear cover as live parts and High Voltage components are accessible when the rear cover is removed.</p>
	<p>DO NOT touch the aerial cable and this unit when there is lightning.</p>		<p>DO NOT place in an unstable location</p>

⚠ Cautions

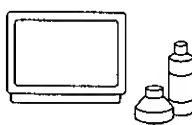
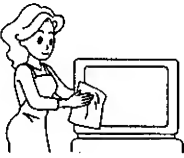
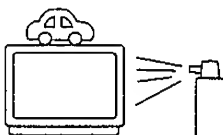

	<p>DO NOT place in humid or dusty location, or areas exposed to smoke or steam. DO NOT place in direct sunlight and other sources of direct heat.</p>		<p>DO NOT touch the power plug if your hands are wet.</p>
---	---	--	---

Warnings and Cautions

⚠ Cautions

	DO NOT stand, or place heavy objects on the unit. Particular care should be taken by families with small children.		Place in a safe location.
	Adequate ventilation is essential to prevent failure of electrical components, we recommend that a gap of at least 10cm(↔) is left all around this unit even when it is placed inside a cabinet or between shelves.		Turn the power "Off" before connecting other electrical equipment.
	Before cleaning, unplug the power plug from the socket.		DO NOT joint the unit.
	Unplug the power plug from the socket if you are not going to use the unit for an extended period.		Ask your sales outlet to install the aerial.

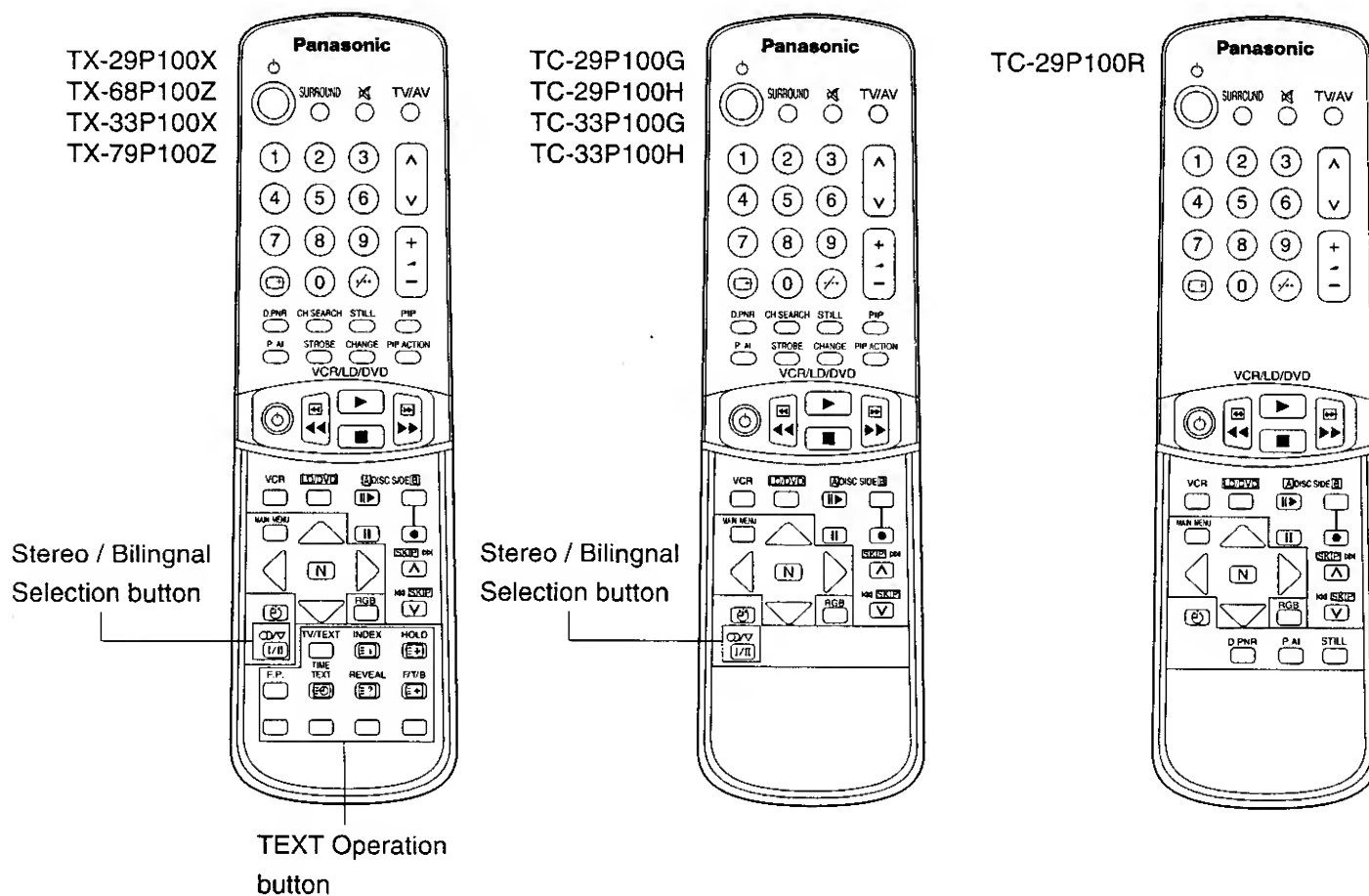
Cleaning

	The unit contains many plastic parts. For this reason DO NOT use benzine, thinner or other chemicals to clean the unit.		Dust will accumulate on the picture screen. Please wipe with a soft cloth from time to time. if you use a chemically treated cloth, please be careful to follow the instructions that come with the cloth.
	DO NOT bring into contact with insecticide or other volatile substances. DO NOT allow the unit to come into contact for extended periods with rubber or vinyl products.		Remove dirt and soiling by wiping with a light cloth. Even if the unit is heavily soiled, do not apply cleaner directly to the unit. Soak a cloth in a solution of neutral cleanser thinned with water. Then wring out the cloth, wipe the unit clean, and finish by wiping with a dry cloth.

Preparation

How to Use This Manual

1. Check the Model Number of your TV set; the Model Number is shown on the rear cover name plate on the set.
Use the table on the opposite page to confirm which features your particular Model is equipped with. This will help you to know which sections of the manual apply to your set.
2. Check the Part Number on the rear of your Remote Control handpiece, and note the functions available, as shown below.



Preparation

Quick Reference Guide for your TV Set

Please check the model number of your set.

This Manual applies to several Models and there are slight differences among them.

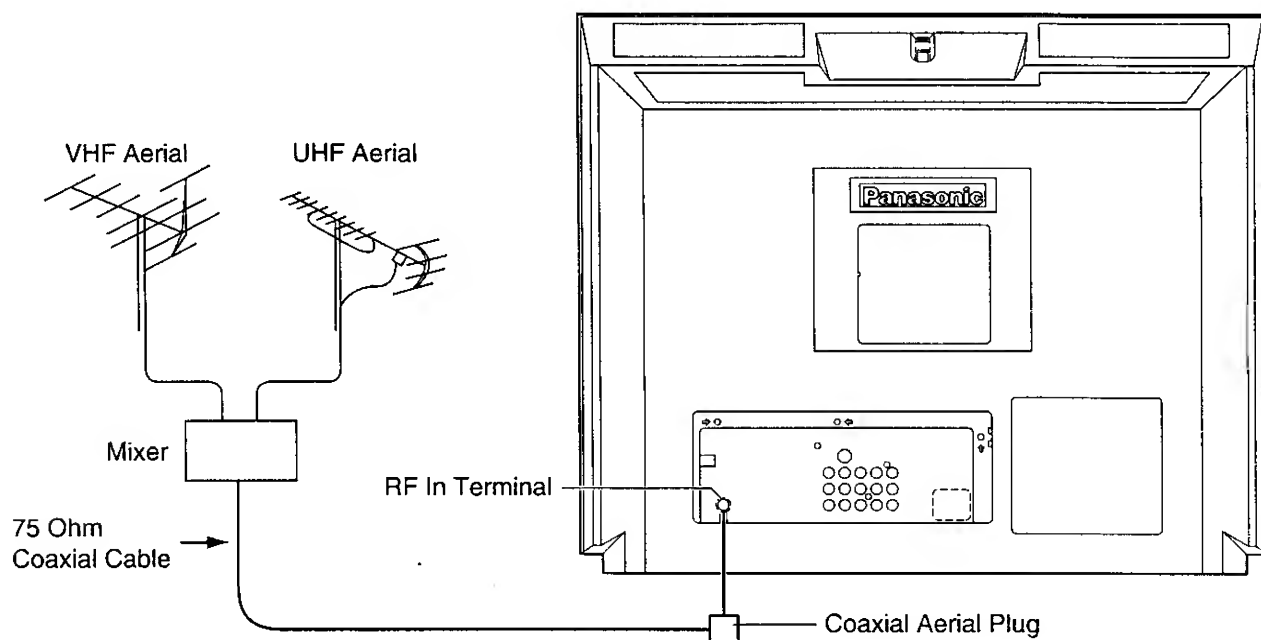
Please check the table below to see what your TV is equipped with before you begin using these Operating Instructions. Instructions are given for all functions, please disregard these which do not apply to your TV.

		Model Number	TC-29P100G	TC-29P100H	TX-68P100Z	TX-29P100X	TC-29P100R	TC-33P100G	TC-33P100H	TX-33P100X	TX-79P100Z	Refer to page
Destination	China	*				*	*					
	Hong Kong		*					*				
	AUSTRALIA			*							*	
	NZ			*							*	
	Southeast Asia				*				*			
	Middle East									*		
Stereo	NICAM I NICAM B,G NICAM D A2(German)	*	*	*	*		*	*	*	*	*	P43
	MONO					*						
Multi Language	English	*	*	*	*	*	*	*	*	*	*	P49
	Chinese	*	*	*	*	*	*	*	*		*	
	Arabic									*		
Headphones	2 Systems (Main/Sub)	*	*	*	*		*	*	*	*	*	P18
	1 System					*						P19
CATV	Hyper	*	*	*	*	*	*	*	*	*	*	P62
Power Source	AC Auto110-240V 50/60Hz				*				*	*		P62
	AC 230*240V 50Hz			*							*	
	AC 220V 50/60Hz	*	*	(only 50Hz)	*	*	*	*	(only 50Hz)		*	
Tuning System	Frequency synthesizer 100Position	*	*	*	*	*	*	*	*	*	*	P63
Receiving System	21Systems	*	*	*	*	*	*	*	*	*	*	P62

*: Function available

Before Operating This Set

Connecting the Aerial Cable to the RF In Terminal

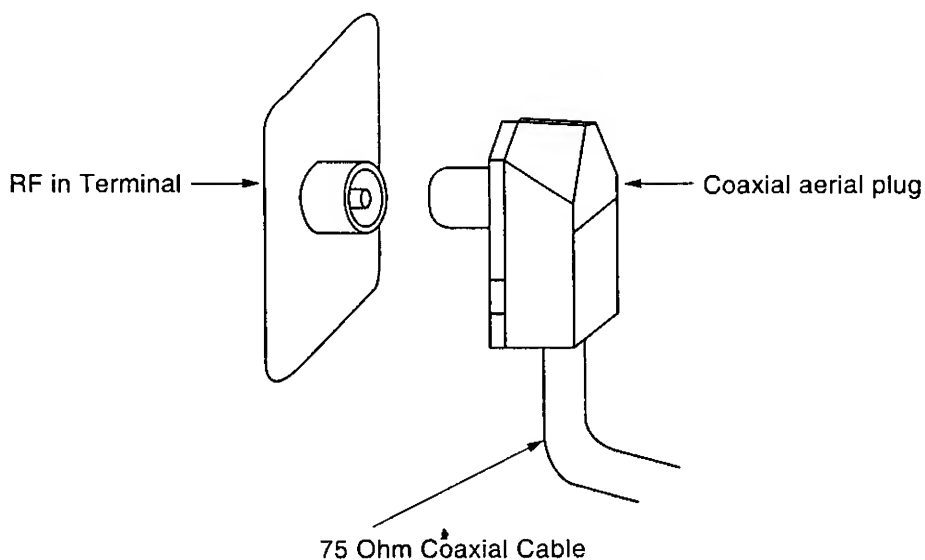


To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ohm coaxial) and the correct terminating plug are required.

If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and your television receiver.

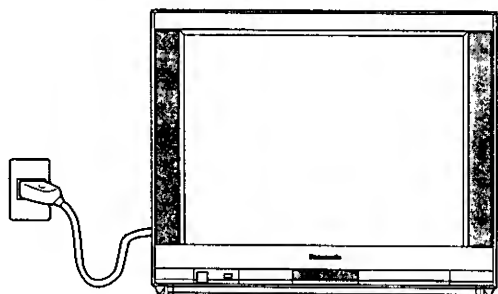
Your local Television Service Centre or Dealer may be able to assist you in obtaining the correct Aerial system for your particular area and accessories required.

Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.



Before Operating This Set

Connecting the Plug to the Wall Outlet

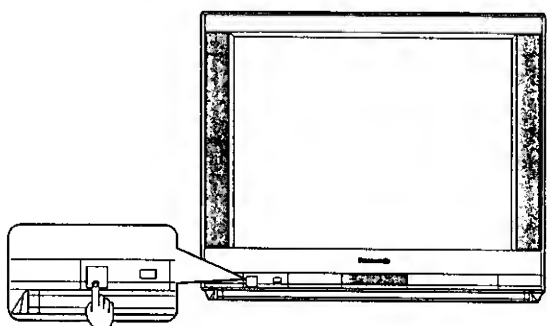


Note:

Mains plug types vary between countries. The mains plug shown at left may therefore not be the type fitted to your set.


When connecting the mains plug to the wall outlet, the power indicator will light (Orange)

How to Turn the Power On



Push the Power switch on Television to turn the set on. The Power Indicator will light.

Power-OFF Orange

Stand-by  Red

Power-ON Green

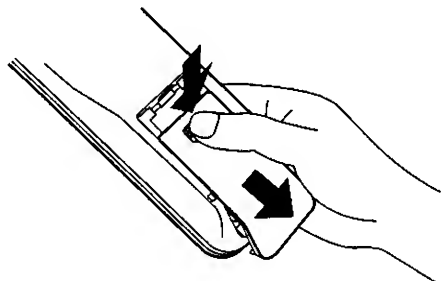
Note:

When in the Stand-by condition (Refer to page 34), it is possible to turn the TV set on by pushing the "Power(Stand-by)" Button any of the "Direct Programme Number Selection" Buttons(0~9) and Programme Number Up and Down Buttons on the TV set or Remote Control.

Before Operating This Set

Battery Installation

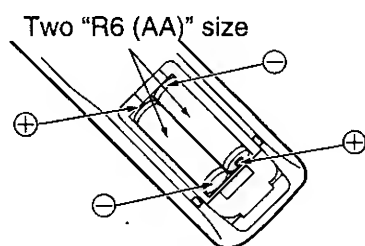
1



Open the cover.

Apply slight downward pressure while pulling towards the bottom.

2

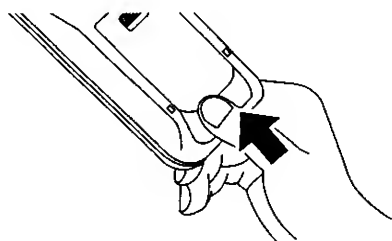


Batteries: Use two "R6 (AA)" size batteries.

Insert the batteries ensuring correct polarity.

This is identifiable by the "+" and "-" symbols on both the batteries and inside the battery compartment.

3



Replace the cover.

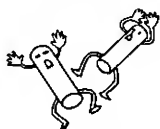
Do not use rechargeable (Ni-Cd) batteries.

They are different in shape and performance and may fail to ensure correct operation.

Battery cautions

The incorrect use of batteries can cause electrolyte leakage which will corrode the Remote Control or cause the batteries to burst.

Old Batteries



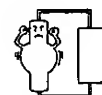
New Batteries



Replace both batteries at the same time.



Don't mix battery types
(alkaline with carbon zinc, etc.)



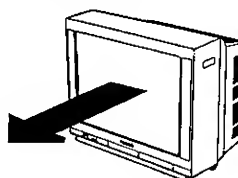
Don't Recharge.

Before Operating This Set

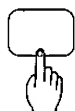
Geomagnetism Correction

Since a large picture tube has been used, blurring of colours and strange discolouration patches may occur depending on the direction the television faces. This is caused by a geomagnetic effect. For optimum viewing, it is necessary to adjust the TV placement.

- 1 The power should be off when determining the installation location and direction.
At this time please verify what direction the TV screen is to face (direction indicated by the arrow)



- 2 Push the "Main Power Switch".

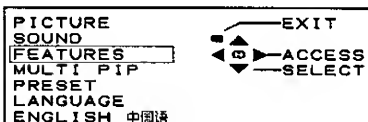
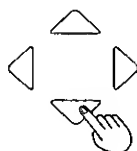


- 3 Push the "Main Menu" Button.

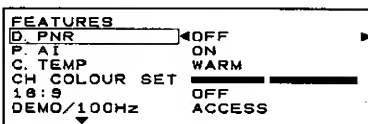
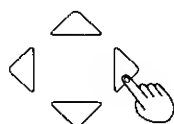


"Main Menu" Condition.

- 4 Select the Features Menu by using the Position Up "▲" or Down "▼" Button.

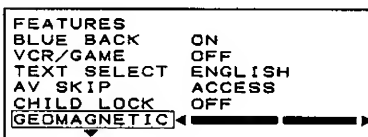
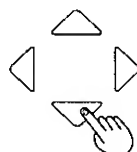


- 5 Push the Position Left "<" or Right ">" Button.

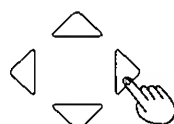


"Features Menu" Condition.

- 6 Select the Geomagnetic Mode by using the Position Up "▲" or Down "▼" Button.



- 7 Push the Position Left "<" or Right ">" Button to adjust the placement so that the coloured patches in the four corners of the screen do not appear.

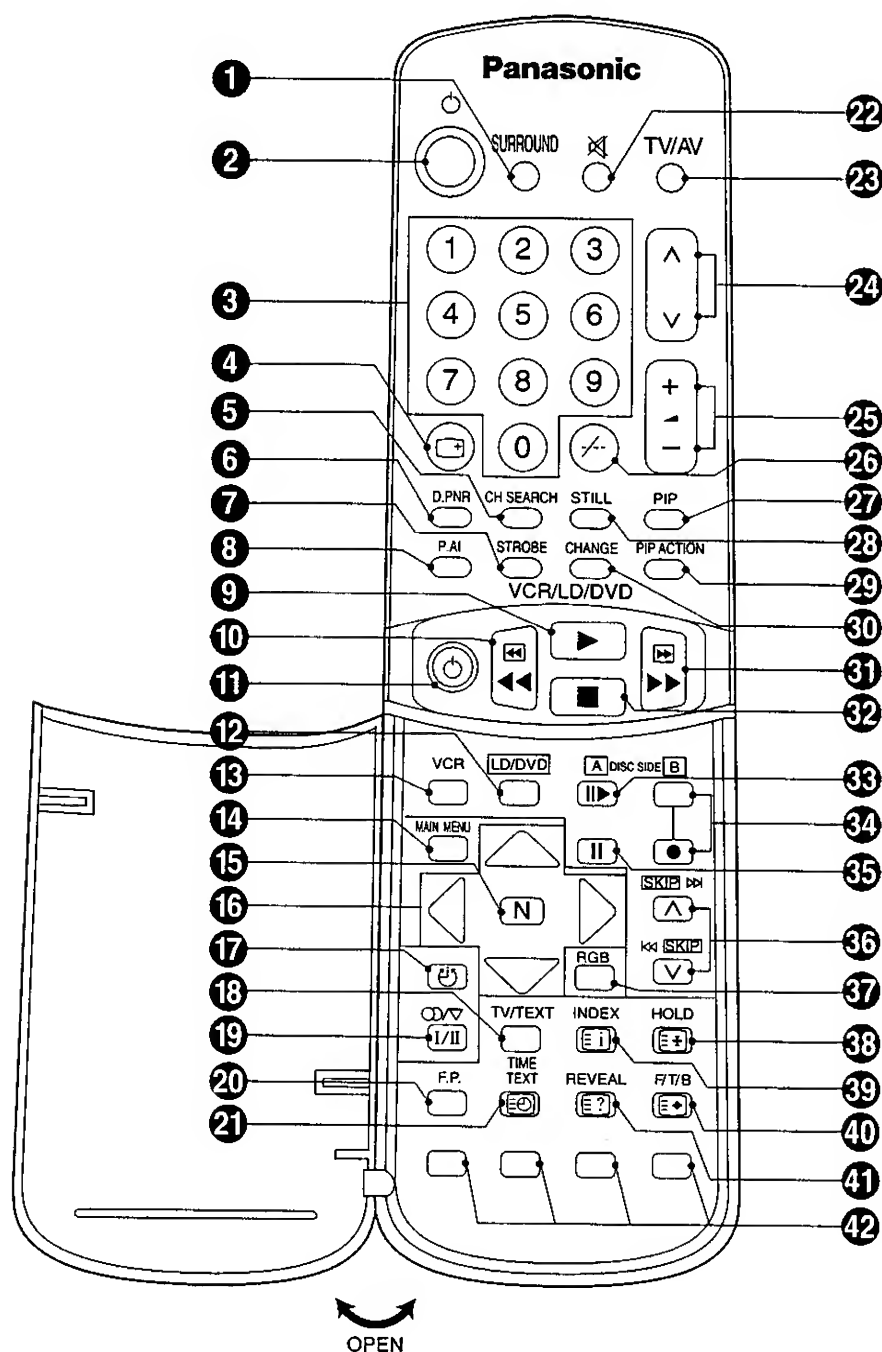


Helpful Hint

- (1) If geomagnetic changes still cause colour patches on the screen even after the TV is installed, turn the power off and turn back on again after about 30 minutes.
- (2) Adjustment for geomagnetism should be performed every time the location of the TV is changed.
- (3) In some cases colour patches will not be completely eliminated even after adjustment, particularly in ferro-concrete buildings and other structures susceptible to geomagnetism. In these cases adjust by changing the installation location.

Location of Controls

Remote Control



Note:

(1) This illustration shows the Remote Control with maximum features.

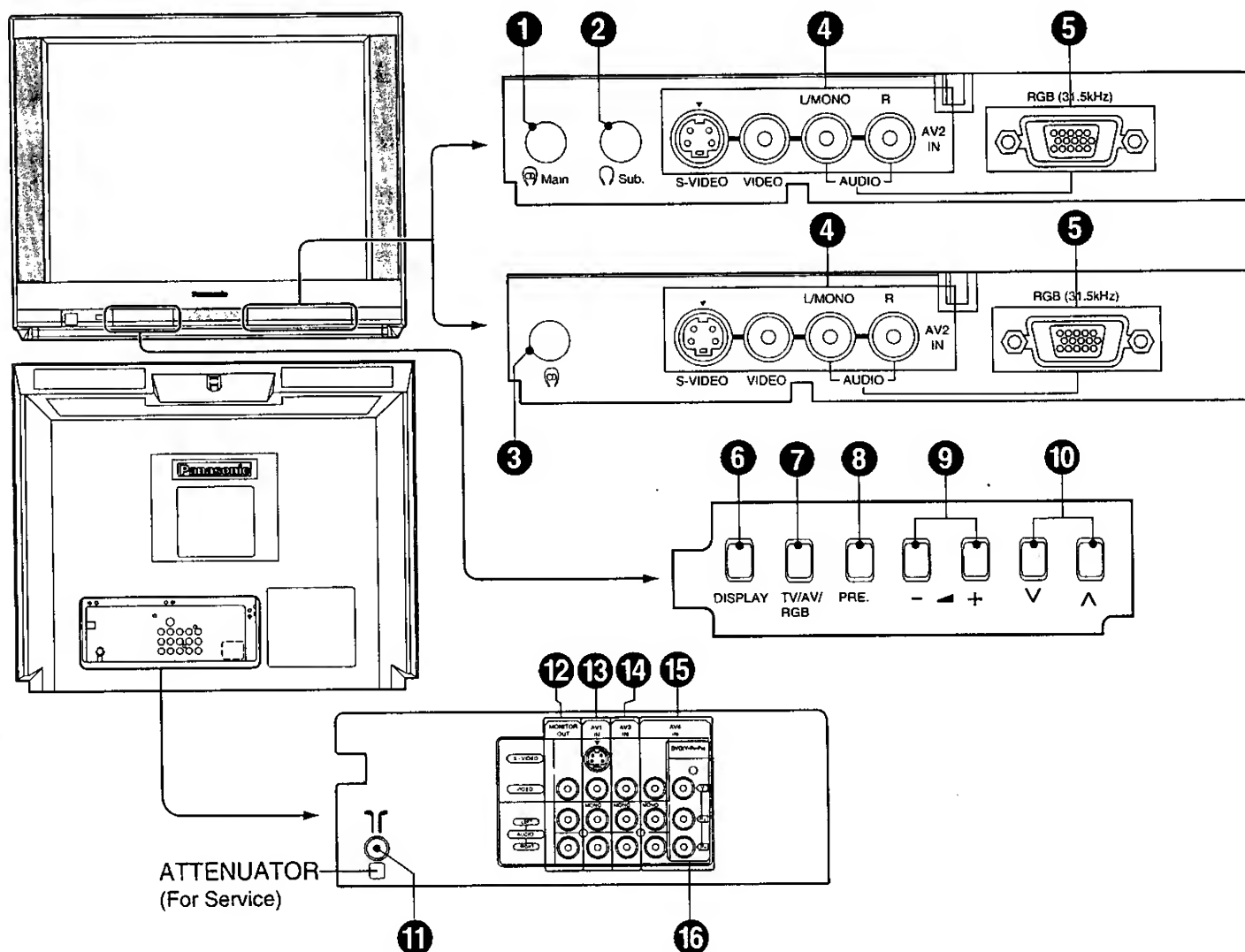
(2) The TEXT Operation and Stereo buttons not present for Models not equipped with certain features. The diagram on page 6 and the table on page 7 identify such variations.

Location of Controls

Item No.	Function	Refer to Page	Item No.	Function	Refer to Page
1	Surround	42	22	Sound Mute	35
2	Power(Stand-by)	34	23	TV/AV Mode Selection	35
3	Direct Programme Number Selection	34	24	Programme Number Up and Down	34
4	Recall	35	25	Volume Up and Down	34
5	Channel Search	41	26	Two Digit Programme Number Selection	34
6	D.PNR	46	27	Picture in Picture Selection	38
7	Strobe	40	28	STILL	41
8	P.AI	46	29	PIP Action	39
9	VCR/LD/DVD Play	59	30	Main/Sub Picture Change	39
10	VCR/LD/DVD Rewind/Review	59	31	VCR/LD/DVD Fast Forward/Cue	59
11	VCR/LD/DVD Power	59	32	VCR/LD/DVD Stop	59
12	LD/DVD button	58	33	VCR Still/Advance (VCR) DISC SIDE A Selection (LD/DVD)	59
13	VCR button	58	34	VCR Record (VCR) DISC SIDE B Selection (LD/DVD)	59
14	Main Menu	20	35	VCR/LD/DVD Pause Still	59
15	Normalisation	44,45	36	Programme Number Up and Down (VCR) Programme Number Skip (LD/DVD)	59
16	Position button	20	37	RGB Mode Selection	35
17	OFF Timer Selection	35	38	TEXT Hold	55
18	TV/TEXT Selection	55	39	TEXT Index	55
19	Stereo/Bilingual Sound Selection (Not equipped for TC-29P100R)	43	40	TEXT Full / Top / Bottom Selection	55
20	TEXT Favourite Page Selection	55	41	TEXT Reveal	55
21	Time TEXT	56	42	TEXT Colour-coded Button	55

Location of Controls

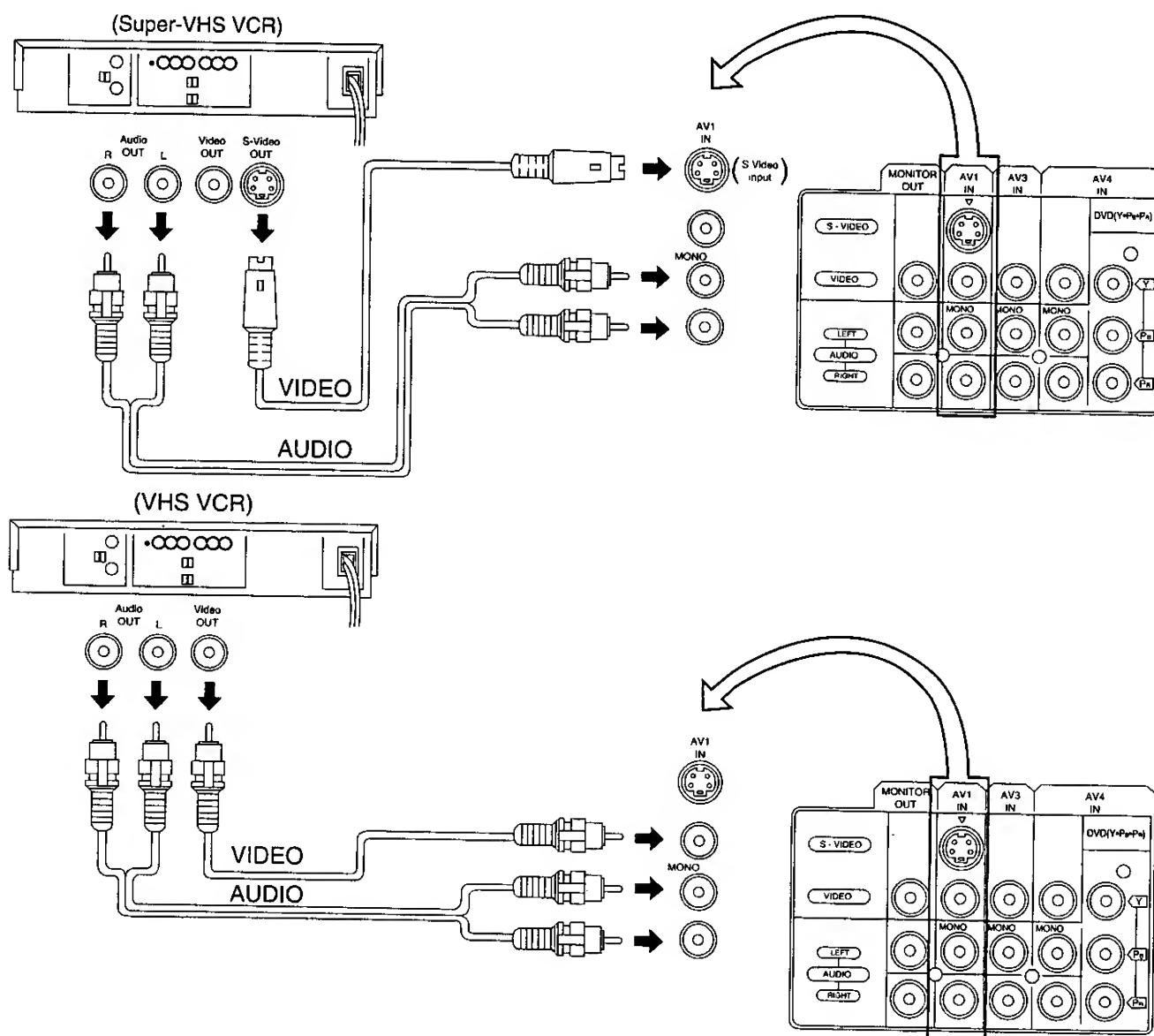
Controls and Terminals on the TV



Item No.	Function	Refer to Page	Item No.	Function	Refer to Page
1	Main Headphones Jack	18	9	Volume Up (+) and Down (-)	34
2	Sub Headphones Jack	18	10	Programme Number Up (Λ) and Down (V)	34
3	Headphone Jack	19	11	Aerial Terminal (RF In Terminal)	8
4	AV2 Input Terminals	15	12	Monitor Output Terminals	17
5	RGB Input Terminal	16	13	AV1 Input Terminals	15
6	Display	35	14	AV3 Input Terminals	15
7	TV/AV/RGB Selection	35	15	AV4 Input Terminals	15
8	Preset	23	16	DVD (Y.Pb.Pr) Input	17

Connections

How to connect the “AV1,2,3 or 4” Input Terminals

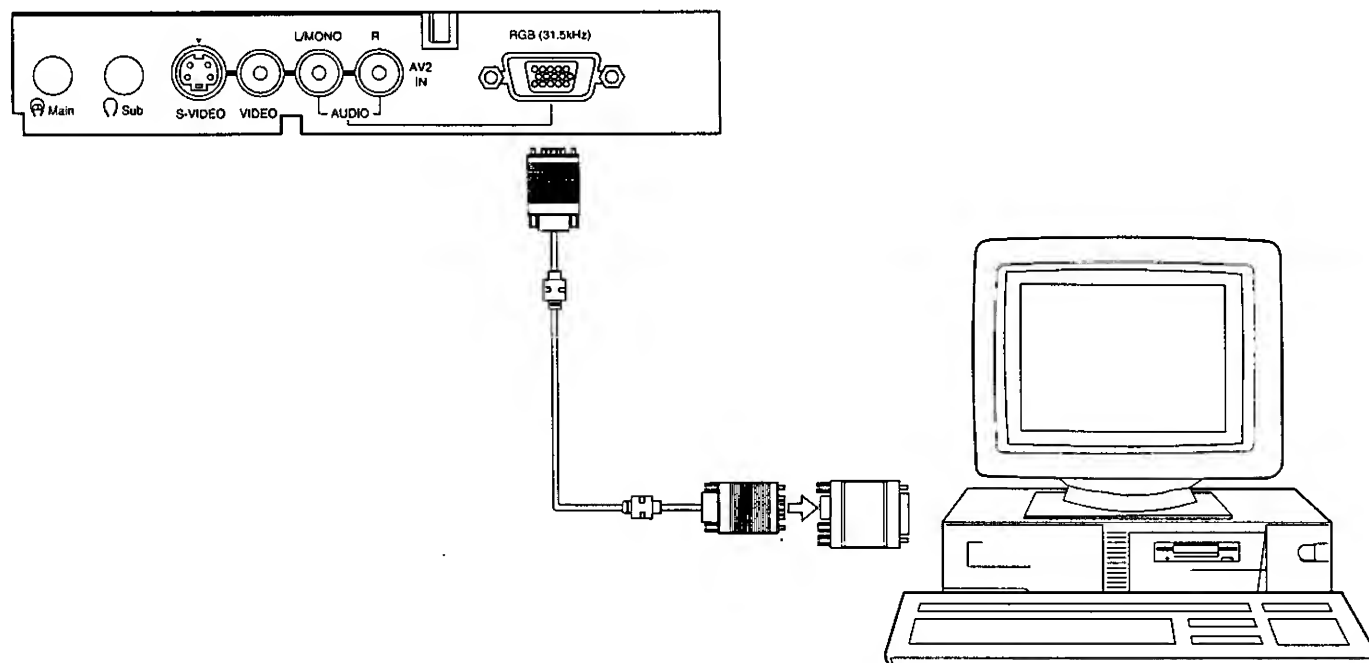


Note:

- (1) When AV1, AV2, AV3 or AV4 is selected, and that AV mode has no input picture signal, the Background Colour of the TV screen will change. (This only occurs if the Blue-Back function is set to the ON condition; refer to page 48 for details.)
- (2) When an S-Video cable is connected to the S-Video terminal, the Video input will be automatically switched off for that AV mode.
- (3) When a Monaural VCR is used, connect the Monaural Audio cable to the Audio “L” (Left) terminal.
- (4) Similar connections are available at the AV1, AV2, AV3 and AV4 input terminals.
- Select the desired AV input position by pushing the TV/AV or TV/AV/RGB buttons. (Refer to page 35)
- (5) The AV4 audio input terminals serves as the audio input terminal for both the Video input and for the DVD input.

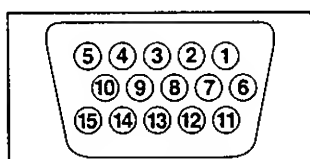
Connections

How to connect the RGB Input Terminals



Note:

- This unit can be connected to PCs with 640×480 (31.5 kHz / 60 Hz) or 640×400 (31.5 kHz / 70 Hz) pixel.
- In some cases other PCs may not work with this TV set.
- There is no audio signal in RGB input.
- The sound of the RGB mode is combined with the Audio signal of AV2.
- Some PC models cannot be connected to the TV set.
- A commercially sold adapter is required to use the RGB cable (D-sub 15P) to connect a PC-98 series computer (which has a D-sub 15P terminal) or a Macintosh computer to the TV set.
- There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.
- Signal Names for D-sub 15P Connector

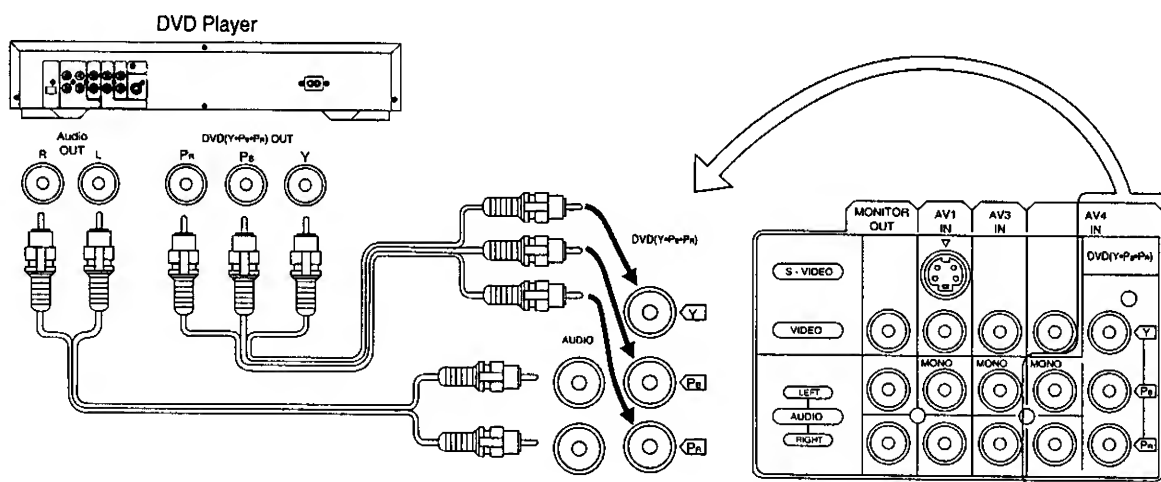


Pin Layout for RGB Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND(Ground)	⑪	GND(Ground)
②	G	⑦	GND(Ground)	⑫	NC
③	B	⑧	GND(Ground)	⑬	HD/SYNC
④	GND(Ground)	⑨	NC(not conncted)	⑭	VD
⑤	GND(Ground)	⑩	GND(Ground)	⑮	NC(not conncted)

Connections

How to connect the DVD Input Terminals

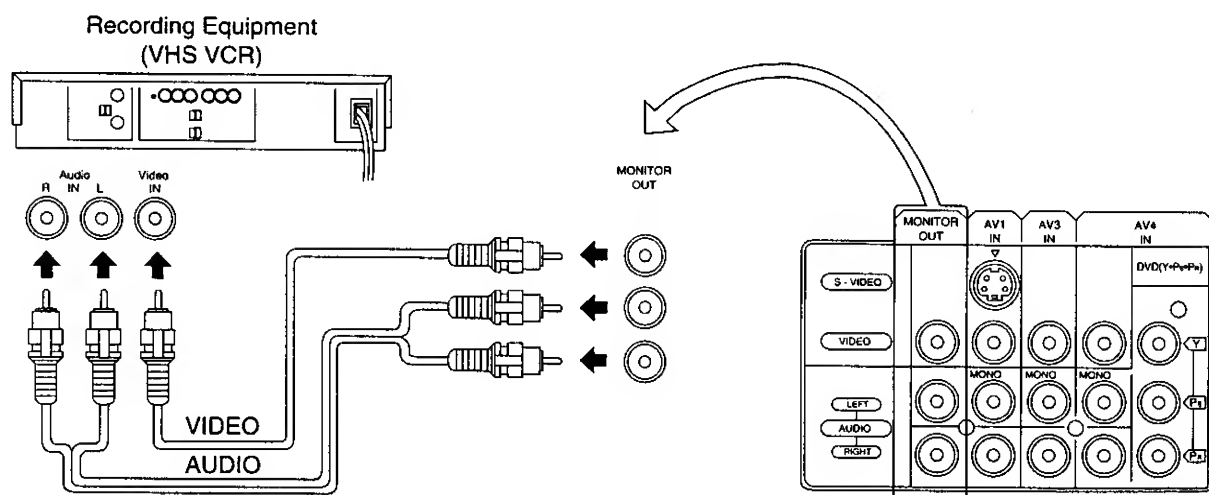


Note:

- (1) The AV4 audio signal is common for both AV4 and DVD input signal terminals.
- (2) The DVD signal input terminal takes priority over the AV4 video signal input terminal.

How to connect the AV Monitor Output Terminals to other equipment.

The "Monitor Out" Terminals output the same signals as main picture on the TV screen and sound from the speaker at that time, e.g. TV programmes or signals from AV1, AV2, AV3 or AV4 input.



Note:

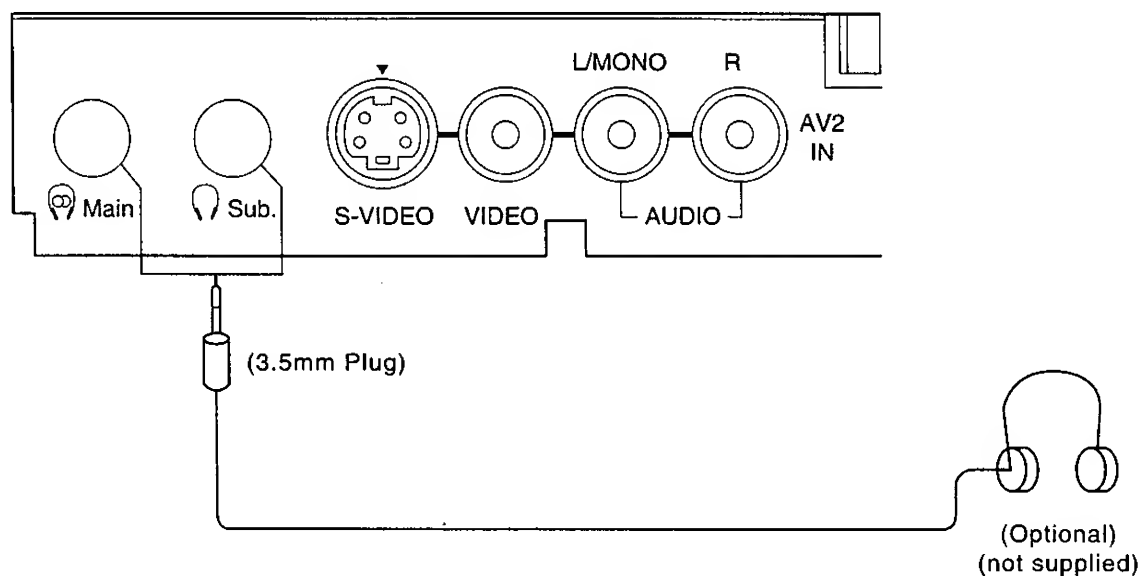
- (1) Never connect the same video recorder with both the VIDEO IN and MONITOR OUT terminals on this TV set, as this could cause incorrect operation.
- (2) The monitor output emits the main picture normal video and audio signals.
- (3) Teletext display on screen will not be output at the MONITOR OUT terminals.
- (4) Even if the television is in picture-in-picture condition, MONITOR OUT terminals output the same signals as main picture on the screen and sound from speakers. Sub picture including strobe, still, channel search, etc. will not be output at the MONITOR OUT terminals.
- (5) The RGB mode signal, and DVD signal (Y, Pb, Pa) are not output at the MONITOR out terminals.

Connections

Connecting Headphones

(For TC-29/33P100G, TC-29/33P100H, TX-29/33P100X, TX-68/79P100Z)

Connect headphones as follows.



You can listen to sound from each of the headphone plugs as shown below.

Screen condition		Speaker Sound	Main Headphones	Sub Headphones	Monitor Output
Single picture/ Teletext		A (Stereo)	A (Stereo)	A (Mono)	A (Stereo)
Picture in Picture		A (Stereo)	A (Stereo)	B (Mono)	A (Stereo)
Picture in Picture/ CHANGE		B (Stereo)	B (Stereo)	A (Mono)	B (Stereo)

Main Headphones plug:

When a Main Headphones plug is inserted into the Headphones socket all speakers will be automatically disconnected; only the Main Headphones will function.

Use Volume Up "+" or Down "-" Button to control volume level.

Sub Headphones plug:

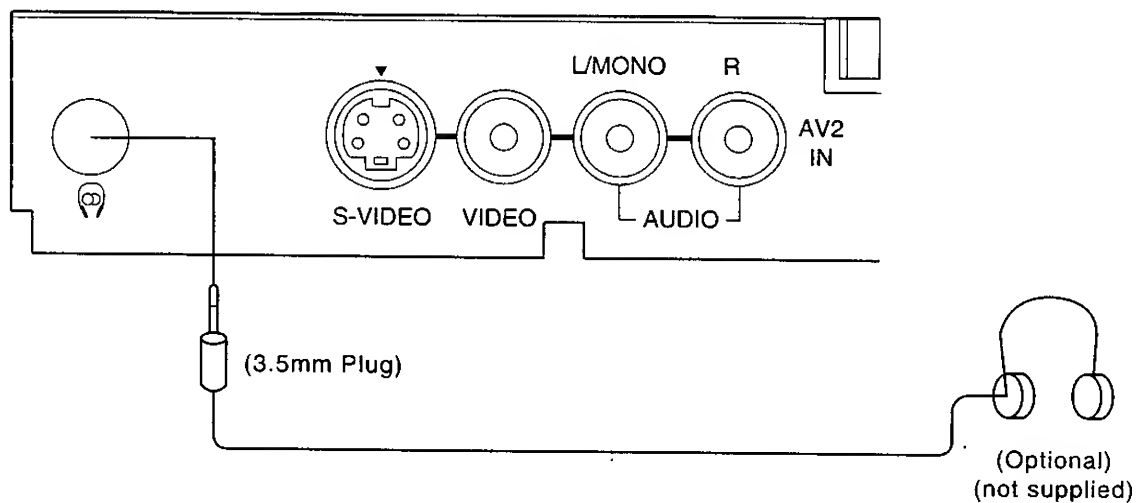
For the sub Headphones volume control, refer to page 39.

Connections

Connecting Headphones (Only for TC-29P100R)

Connect headphones as follows.

When a Headphones plug is inserted into the Headphones socket all speakers will be automatically disconnected; only the Headphones will function.



Flow Chart of Main Menu

When the "MAIN MENU" button is pushed at the Main Menu screen, the screen display will return to the normal viewing condition.

When the "MAIN MENU" button is pushed at each MENU screen (Picture, Sound, Features, Language, Preset, Multi PIP), the screen display will return to the Main Menu screen.

Menu	On Screen Indication	
Picture		
Sound		
Features		
Multi PIP		<p>MULTI PIP MENU does not indicate in RGB input mode.</p>
Preset		
Language		<p>PRESET MENU does not indicate in RGB input mode.</p>

Flow Chart of Main Menu

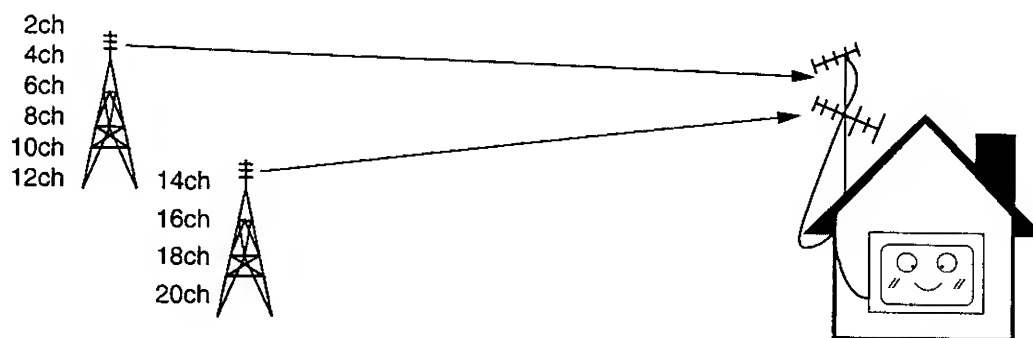
RGB / TEXT mode

Menu	On Screen Indication
Screen	<div> <div> PICTURE SOUND FEATURES SCREEN PRESET LANGUAGE ENGLISH 中国语 </div> <div> EXIT ACCESS SELECT </div> </div> <div> SCREEN H-SIZE V-SIZE H-POS. V-POS. PARABOLA </div> <p>Screen Press RGB button. After setting RGB mode ON, SCREEN mode is accessed upon pressing "Main Menu" button.</p>
Text	<div> <div> PICTURE SOUND FEATURES TEXT PRESET LANGUAGE ENGLISH 中国语 </div> <div> EXIT ACCESS SELECT </div> </div> <div> TEXT DISPLAY CANCEL LIST STORE TEXT MODE LIST/FAST </div> <p>Text Press TV/TEXT button at the channel receiving Text Signal to set set Text menu ON. TEXT mode is accessed upon pressing "Main Menu" button.</p>

Tuning Procedure

Channel Selection

Select the most easily viewed channel selection method.



Example

Programme Number	Channel Display	Received Channel
1	2	2
2	4	4
3	6	6
4	8	8
5	10	10
6	12	12
7	14	14
8	16	16
9	18	18
10	20	20

POSITION SELECT

When the Channel Selection is on POS. (Position), and Auto Tune is performed, the unit memories the channels Tuned in order from Programme No.1.

Push the button ① to view channel 2.

Push the button ② to view channel 4.

Push the button ③ to view channel 6.

During Position mode various reception channels can be viewed.

Example

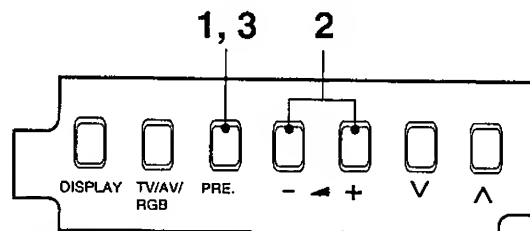
Programme Number	Channel Display	Received Channel
1	—	—
2	2	2
3	—	—
4	4	4
5	—	—
6	6	6
7	—	—
8	8	8
9	—	—
10	10	10
⋮	⋮	⋮
20	20	20
⋮	⋮	⋮

DIRECT SELECT

When the Channel Selection is on DIRECT, and Auto Tune is performed, the unit memories the programme number which is the same as the channel Tuned.

This method allows you to select the desired channel by pushing the channel display number directly on the remote control to select the station. The channel display numbers for the broadcast stations in each country are listed on Page 25.


Tuning Procedure



(TV set)

Before Country System Selection and AUTO tuning, set the "CHANNEL SELECT" mode, as detailed below.

1



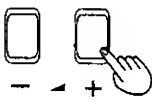
Push the "PRE." (PRESET) Button, setting the Preset Menu to "CH SELECT".

1
CH1

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

"CH SELECT" Condition

2



Select the "CH SELECT (Channel Select)" Mode by pushing the Volume Up "+" or Down "-" Button.


1
CH1

PRESET	
CH SELECT	DIRECT
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

Setting range when the "POSITION" has been selected: Position 0-99
Setting range when the "DIRECT" has been selected: Channel 1-125

The channel select indicator will change as follows.
DIRECT ↔ POSITION.

3



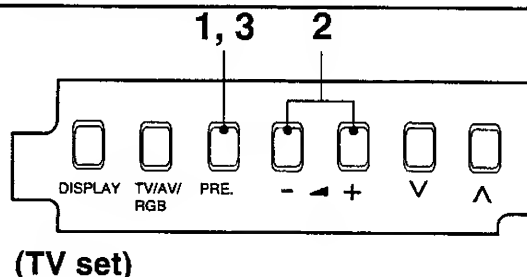
Push the "PRE." (PRESET) Button 8 times.

1
CH1


This returns the set to the normal viewing condition.

Tuning Procedure

Country System Selection

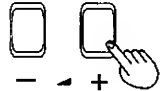


Before AUTO tuning and MANUAL tuning, set the "SYSTEM SELECT" mode, as detailed below.

- 1**  Push the "PRE." (PRESET) Button twice, setting the Preset Menu to "SYS SELECT".

1 CH1

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF


"SYS SELECT" Condition.
- 2**  Select the appropriate System by pushing the Volume Up "+" or Down "-" Button.

1 CH1

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

The system select indicator will change as follows.

```

graph TD
    CHINA --> HK/UK
    HK/UK --> ASIA/M.EAST
    ASIA/M.EAST --> NZ/INDONES
    NZ/INDONES --> AUSTRALIA
    JAPAN --> CATV
    CATV --> AMERICA
    AMERICA --> SPECL VER
    SPECL VER --> E.EUROPE
            
```
- 3**  Push the "PRE." (PRESET) Button 7 times.

This returns the set to the normal viewing condition.

System Select by Country

SYSTEM SELECT	COUNTRY
CHINA	China
HK/UK	Hong kong, United Kingdom
ASIA/M•E	Malaysia, Singapore, Thailand, Asia countries, Kuwait, Saudi Arabia, United Arab Emirates, Middle East countries, etc.
NZ/INDONES	New Zealand, Indonesia, etc.
AUSTRALIA	Australia
E•EUROPE	CIS, Poland, etc.
SPECL VER	South Africa
AMERICA	U.S.A., Chile, Mexico, Panama, Pelu, Philippines, Taiwan, Venezuela, etc.
CATV	USA CATV
JAPAN	Japan

Tuning Procedure

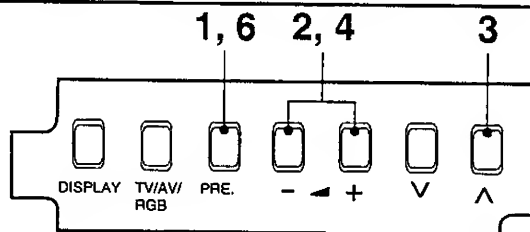
Channel Allocation

- CATV (USA CATV) channel numbers as recommended by the joint EIA/NCTA Engineering committee and published as EIA INTERIM STANDARD No.6-CABLE TELEVISION CHANNEL IDENTIFICATION PLAN-MAY 1983.
- The receiving channels are as follows;

SYS SELECT	CHINA	HK/UK	ASIA/M•E	NZ/INDONES	AUSTRALIA	E•EUROPE	SPECL VER	AMERICA	CATV	JAPAN
CH DISPLAY	RECEIVE CHANNEL									
0	—	—	—	—	0	—	—	—	—	—
1	1	—	—	1	1	—	—	—	—	—
2	2	—	2	2	2	—	—	—	—	—
3	3	—	3	3	3	—	—	—	—	—
11	11	—	11	11	11	11	11	11	11	11
12	12	—	12	—	12	12	12	12	12	12
13	13	—	—	—	—	—	13	13	—	13
14	14	—	—	—	—	—	—	14	—	—
15	15	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—
21	—	21	21	21	—	21	21	—	—	—
22	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	28	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—	—
57	57	—	—	—	—	—	—	—	—	—
58	—	—	—	—	—	—	—	—	—	—
59	—	—	—	—	—	—	—	—	—	—
62	—	62	62	62	62	62	62	62	62	62
63	—	63	63	63	63	63	63	63	63	C13
64	—	—	—	—	—	—	—	—	—	—
69	—	69	69	69	69	69	69	69	—	—
70	—	—	—	—	—	—	—	—	—	—
71	—	—	—	—	—	—	—	—	—	—
73	—	—	—	—	—	—	—	—	—	—
74	—	S'1	S'1	S'1	—	S'1	S'1	—	—	—
75	—	S'2	S'2	S'2	—	—	S'2	—	—	—
76	—	S'3	S'3	S'3	—	—	S'3	—	—	—
77	—	—	—	—	—	—	—	—	—	—
78	—	—	—	—	—	—	—	—	—	—
79	—	—	—	—	—	—	—	—	—	—
80	—	S1	S1	S1	—	S1	S1	—	—	—
81	Z1	S2	S2	S2	—	S2	S2	—	—	—
82	—	—	—	—	—	—	—	—	—	—
89	Z9	S10	S10	S10	—	S10	S10	—	—	—
90	Z10	S11	S11	S11	5A	S11	—	—	—	—
91	Z11	S12	S12	S12	9A	S12	—	—	—	—
92	Z12	S13	S13	S13	—	S13	—	—	—	—
93	Z13	S14	S14	S14	—	S14	S14	—	—	—
94	Z14	S15	S15	S15	—	S15	S15	—	—	—
95	Z15	S16	S16	S16	—	S16	S16	—	—	—
96	Z16	S17	S17	S17	—	S17	S17	—	—	—
97	Z17	S18	S18	S18	—	S18	S18	—	—	—
98	Z18	S19	S19	S19	—	S19	S19	—	—	—
99	Z19	S20	S20	S20	—	S20	S20	—	99	C49
100	Z20	S21	S21	S21	—	S21	S21	—	100	—
101	—	—	—	—	—	—	—	—	—	—
117	Z37	—	—	—	—	—	—	—	—	—
118	—	—	—	—	—	—	—	—	—	—
120	—	S41	S41	S41	—	S41	S41	—	—	—
121	—	—	—	—	—	—	—	—	—	—
125	—	—	—	—	—	—	—	—	125	—

Tuning Procedure

Automatic Tune (Channel Select and Country System must already be set; Refer to pages 22 to 25)



(TV set)

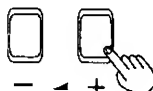
This TV uses automatic tuning to determine whether or not a broadcast signal is being sent which it can receive, and automatically prepares so that the channel selection can respond to both the position select and direct select modes.

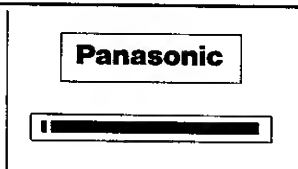
- 1  Push the "PRE." (PRESET) Button 3 times.

1 CH1

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	5.5MHz
SOUND SYS	AUTO
COLOUR SYS	ACCESS
FINE TUNE	OFF
SKIP	


Automatic Search "AUTO TUNE" Condition.

- 2  Push the Volume Up "+" or Down "-" Button.



Search Start.

The best tuning position is automatically memorized.

- 3  After all stations are tuned, the on-screen display will automatically change from "AUTO TUNE" to "SOUND SYS" Position. Confirm the sound condition of each Programme Number by using the Programme Number Up "^" Button.

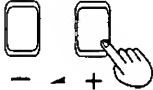
2 CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	5.5MHz
SOUND SYS	AUTO
COLOUR SYS	ACCESS
FINE TUNE	OFF
SKIP	

If the Sound is not clear or no sound is produced on a Programme Number, then follow the next Step 4.

Note:

When sound volume is too small to confirm, turn it up by using the sound volume button on the remote control.

- 4  If necessary, push the Volume Up "+" or Down "-" Button, to improve the Sound quality.

2 CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	5.5MHz
SOUND SYS	AUTO
COLOUR SYS	ACCESS
FINE TUNE	OFF
SKIP	

The sound indicator will change as follows.

4.5MHz ↔ 5.5MHz
 6.5MHz ↔ 6.0MHz

Tuning Procedure

5



Use the Programme Number Up “^” button to sequentially check each station.
If necessary, repeat steps 3 to 4 for each Programme Number.

6

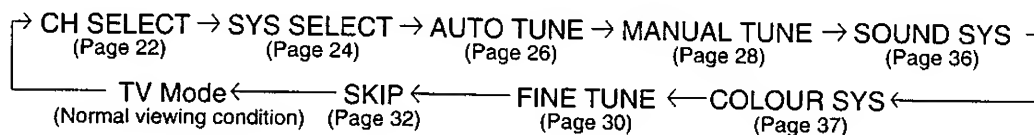


After all stations are tuned, push the “PRE.” (PRESET) Button 4 times.

This returns the set to the normal viewing condition. Programme Number memory locations.

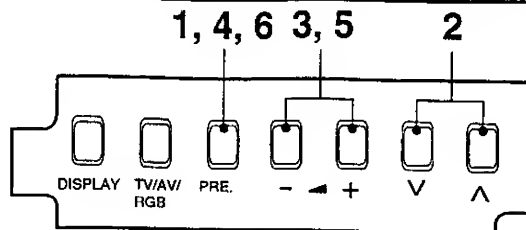
Helpful Hint

- (1) To tune, push the Main Menu Button and Position Button on the Remote Control.
By following the display in the Preset Menu, setting can be formed using only the Remote Control.
- (2) If a clear picture with correct colours cannot be obtained when a Broadcast or AV signal is received, refer to the “Colour System Selection” operation on page 37.
- (3) After the Automatic tune is finished, push the Programme Number “Up” Button to confirm the tuning condition for each Programme Number. If some Programme Numbers are unused, it is possible to skip such Programme Numbers. Please refer to the Programme Number Skip operation on page 32.
- (4) Repeated pushing of the “PRE.” (PRESET) button changes the Preset Menu as follows;



Tuning Procedure

Manual Tune (Channel Select and Country System must already be set; Refer to pages 22 to 25)



(TV set)

1

PRE.

Push the "PRE." (PRESET) Button 4 times.

Manual Search "MANUAL TUNE" Condition.

1 CH1

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

2

V ^

Push either the Programme Number Up "▲" or Down "▼" Button.

Select the desired Programme Number.

2 CH2

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

3

- +

Push the Volume Up "+" or Down "-" Button.

Volume "+": Next higher Channel

Volume "-": Next lower Channel

Search Start.

The best tuning position is automatically memorized.

Panasonic

I

2 CH4

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

4

PRE.

Push the "PRE." (PRESET) Button.

"SOUND SYS" Condition.

2 CH4

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

Tuning Procedure



If the sound is not clear or no sound is produced on a Programme Number Position, push the Volume Up "+" or Down "-" Button.

2
CH4

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	45.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

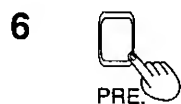
You may improve the Sound quality.

The sound indicator will change as follows.

4.5MHz ↔ 5.5MHz
↕
6.5MHz ↔ 6.0MHz

Note:

When sound volume is too small to confirm, turn it up by using the sound volume button on the remote control.



Push the "PRE." (PRESET) Button 4 times.

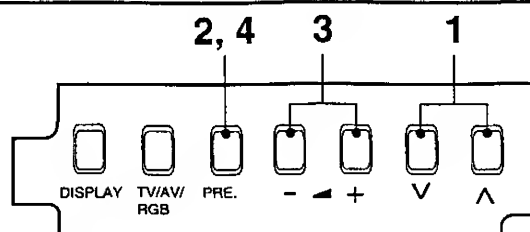
This returns the set to the normal viewing condition.

Helpful Hint

- (1) If a clear picture cannot be obtained even when a Broadcast or AV signal is received, refer to the "Colour System Selection" operation on page 37.
- (2) After the Manual tune is finished, push the Programme Number "Up" Button to confirm the tuning condition for each Programme Numbers. If some Programme Numbers are unused, it is possible to skip such Programme Numbers. Please refer to the Programme Number skip operation on page 32.
- (3) When using a VCR without video and audio input/output terminals, it is convenient to connect the aerial cable as indicated in the instruction manual of VCR and to set the designated channel to programme No."0". In that case, perform manual tune after setting the colour system and sound system in advance. Further, in multi-system VCR, it is more convenient to set the designated channel to several programme Numbers.

Tuning Procedure

Fine Tuning



(TV set)

Under normal reception conditions this function is not required or necessary.

However, in areas of poor reception or constant interference, a slight adjustment of the tuning may improve the picture and sound quality.



1 Select the channel which you want to improve, using the Programme Number Up “^” or Down “V” Button.

2

Select the desired Programme Number.



2 Push the “PRE.” (PRESET) Button 7 times, setting the Preset menu to “FINE TUNE”.

2

Fine Tune Condition.

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF



3 Push and hold the Volume Up “+” or Down “-” Button until the clear picture is received.

Panasonic

Fine Tune Start.

The AFC function is deactivated.

The “■” symbol appears to the left of the Programme Number.

•2
CH2

PRESET	
CH SELECT	POSITION
SYS SELECT	ASIA/M. EAST
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

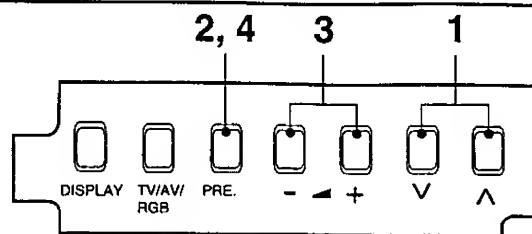


4 Push the “PRE.” (PRESET) Button twice.

This returns the set to the normal viewing condition

Tuning Procedure

How to Cancel the Fine Tuning

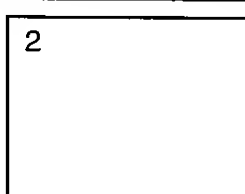


(TV set)

Cancelling previously adjusted (manually) fine tuning, means re-activating the AFC (Automatic Frequency Control) Function, also known as AFT (Automatic Fine Tuning). Re-activating the Automatic Fine Tuning means albalming the set to automatically tune to the optimum tuning position, for that programme Number.



Select the "AFC OFF" Programme Number which you want to return to Automatic Frequency Control (cancel the manual fine tuning).



"AFC OFF" Programme Numbers are indicated to you by the "■" symbol to the left of the Programme Numbers in the On-Screen Display.

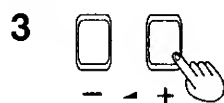


Push the "PRE." (PRESET) Button 4 times, setting the Preset menu to "MANUAL TUNE".

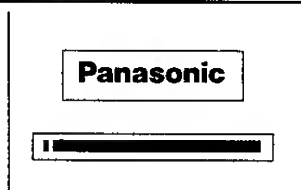
•2
CH2

Manual Search Condition.

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF



Push the Volume Up "+" or Down "-" Button, briefly.



The best tuning position is automatically memorized. (In other words, manually tune away from the transmission, and then back to it.)

2
CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

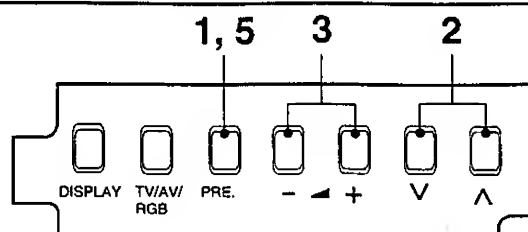


Push the "PRE." (PRESET) Button 5 times.

This returns the set to the normal viewing condition.

Tuning Procedure


Programme Number Skip



(TV set)

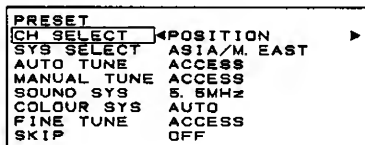
It is possible to skip Programme Number on which no TV stations are tuned appearing on the screen. The function is only effective when selecting Programme Numbers by pushing the Programme Number Up or Down Button either on the TV set or the Remote control.

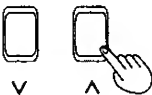
- 1**



Push the "PRE." (PRESET) Button 8 times, setting the Preset menu to "SKIP".

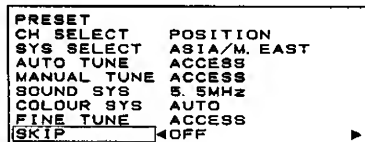
Channel Skip Condition.

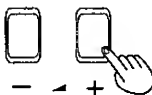

- 2**



Select a Programme Number you want to skip by pushing the Programme Number Up "V" or Down "V" Button.

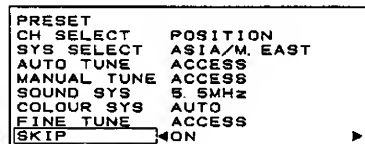
2
CH2


- 3**




Push the Volume Up "+" or Down "-" Button.


2
CH2



The displayed "OFF" condition changes to "ON".
- 4**



Repeat Steps 2 and 3 for the remaining Programme Numbers for which the Skip function is desired.
- 5**

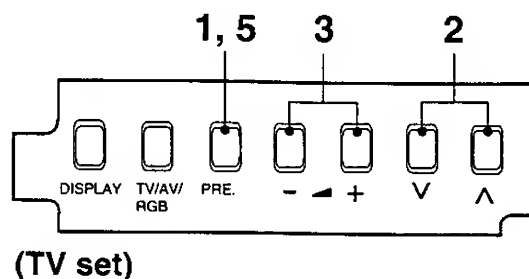


After the Skip Operation is completed, push the "PRE." (PRESET) Button (once).

This returns the set to the normal viewing condition.

Tuning Procedure

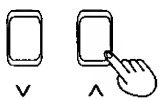
How to Cancel the Skip Function



- 

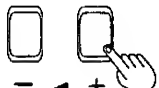
Push the "PRE." (PRESET) Button 8 times, setting the Preset menu to "SKIP".

1	CH1	Channel Skip Condition
PRESET	POSITION	
CH SELECT	ASIA/M. EAST	
SYS SELECT	ACCESS	
AUTO TUNE	ACCESS	
MANUAL TUNE	5.5MHz	
SOUND SYS	AUTO	
COLOUR SYS	ACCESS	
FINE TUNE	OFF	
SKIP	OFF	

- 


Select a skipped Programme Number, by pushing the Programme Number Up "^" or Down "v" Button.

2	CH2	
PRESET	POSITION	
CH SELECT	ASIA/M. EAST	
SYS SELECT	ACCESS	
AUTO TUNE	ACCESS	
MANUAL TUNE	5.5MHz	
SOUND SYS	AUTO	
COLOUR SYS	ACCESS	
FINE TUNE	ON	
SKIP	ON	


- 

Push the Volume Up "+" or Down "-" Button.

2	CH2	The displayed "ON" condition changes to "OFF".
PRESET	POSITION	
CH SELECT	ASIA/M. EAST	
SYS SELECT	ACCESS	
AUTO TUNE	ACCESS	
MANUAL TUNE	5.5MHz	
SOUND SYS	AUTO	
COLOUR SYS	ACCESS	
FINE TUNE	OFF	
SKIP	OFF	

- 

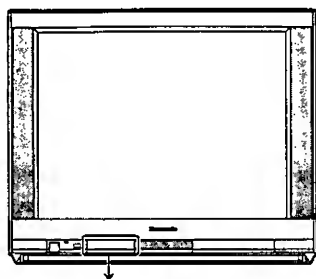
Repeat Steps 2 and 3, if you wish to cancel the skip function on any other Programme Number.

- 

After the Skip Cancel Operation is completed, push the "PRE." (PRESET) Button (once).

This returns the set to the normal viewing condition.

General Operation



1



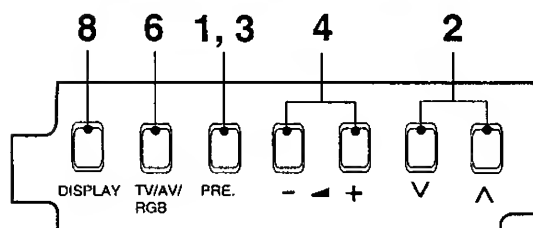
How to switch the power ON or OFF
The TV set must first be switched on at the wall outlet and at the Power Switch. (Refer to page 9)

Push this button to turn the TV set ON, from STANDBY mode.

Push it again to turn the TV set OFF, STANDBY mode.

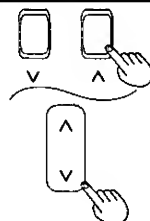
Note:

It is also possible to turn the TV set on STANDBY by pushing the "Direct Programme Number Selection" Buttons (0-9) and the "Programme Number Up or Down" Button, either on the set or on the Remote Control.



(TV set)

2



Programme Number Selection

Push the Programme Number Up "^" or Down "v" Button to select the next higher or lower Programme number.

3



Direct Programme Number Selection (CH SELECT = POS.)

You can select the numbers directly by pushing "Number 0-9" button and the two digit Numbers by pushing "Two Digit" and "Programme Number" buttons.

Programme Number 8 ⑧

Programme Number 12..... ①, ②



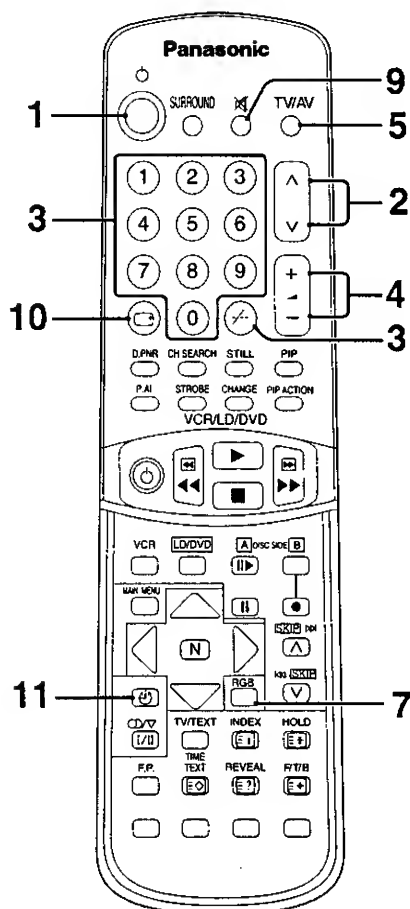
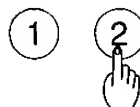
Direct Programme Number Selection (CH SELECT = DIRECT)

You can select the number directly by pushing the corresponding programme number button.

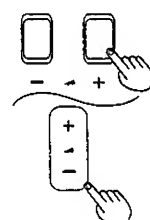
Programme Number 8..... ⑧

Programme Number 36..... ③, ⑥

Programme Number 124... ①, ②, ④



4





Volume Adjustment


Push the Volume Up "+" or Down "-" Button to increase or decrease the sound volume level.


VOLUME ————— 12

General Operation

- 5 TV/AV**

TV/AV Mode Selection
 Push the "TV/AV" Button to select TV,AV1,AV2,AV3,AV4 input signal modes sequentially.


- 6 TV/AV/RGB**

TV/AV/RGB Mode Selection
 Push the "TV/AV/RGB" Button to select TV, AV1, AV2, AV3, AV4, RGB input signal modes sequentially.

- 7 RGB**

RGB Mode Selection
 Push the "RGB" mode selection button to select the RGB mode. Push the button once again to return the original mode.


- 8 DISPLAY**

Display Button
 By pushing the Display button various demonstrations and on screen displays will appear.
 Push the Display button a second time to halt the display/demonstration mode, and return the set to the normal viewing condition.

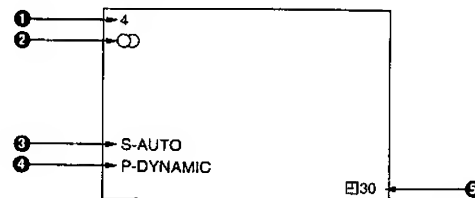
Note:

When this button is pushed, the Picture and Sound Menus change to Picture (DYNAMIC) and Sound (DYNAMIC).


- 9**

Mute Button
 Push this button to mute the sound completely.
 The "Mute" symbol will appear. (colour change to Red)

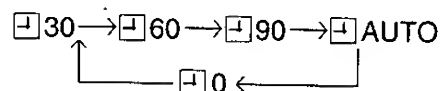
Push the button once again to restore the previous sound level, and cancel the mute.

- 10**

Recall Button
 Push the "Recall" Button to display the current system status.
 Push again to cancel.



- ❶ Programme Number (Refer to page 34)
- ❷ Audio Mode (Refer to page 43)
- ❸ Sound Menu (Refer to page 45)
- ❹ Picture Menu (Refer to page 44)
- ❺ OFF Timer (Refer to page 35)

- 11**

Off Timer Button
 The TV set may be preset to switch to stand-by after a fixed period.
 By pushing "OFF-Timer" Button, you can select the preset time; either "30", "60", "90" minutes or AUTO Mode.



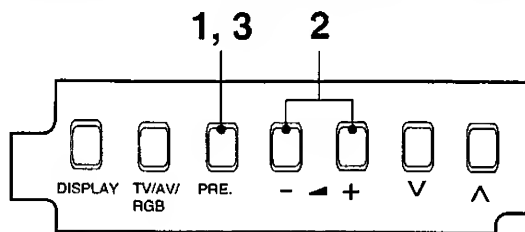
Setting Off-Timer to AUTO mode.
 If the set is not switched off when the TV station stops broadcasting, it will automatically go to Stand-by Mode after 5 minutes.

Note:

Off-Timer setting will not operate in AUTO mode when the Television set is in AV Mode.


General Operation

Sound System Selection (Different countries use differing systems)



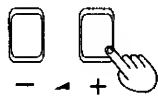
(TV set)

This function is used only in the TV mode, and is not applicable in AV Mode when the sound is not clear or no sound is produced on a Programme Number.

- 1**  Push the "PRE." (PRESET) Button 5 times.

2 CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

Sound System Condition.
- 2**  Push the Volume Up "+" or Down "-" Button repeatedly until the optimum sound is obtained.

2 CH2


PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

The sound system will change as shown.

4.5MHz ↔ 5.5MHz

↕ ↕

6.5MHz ↔ 6.0MHz

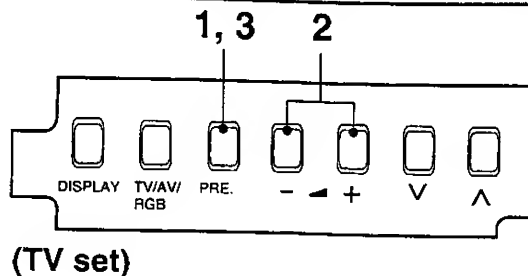
Note:
These are different sound broadcast transmission systems applicable to differing countries.
- 3**  Push the "PRE." (PRESET) Button 4 times.

This returns the set to the normal viewing condition.

The selected Sound System is automatically memorised.


General Operation

Colour System Selection (Different countries use differing systems)



If a clear picture with current colours cannot be obtained when a Broadcast or AV signal is received.

- 1**




Push the "PRE." (PRESET) Button 6 times. (In AV Mode it is only necessary to push the "PRE." (PRESET) button once.)

2
CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

Colour System Condition.
- 2**




Push the Volume Up "+" or Down "-" Button repeatedly until the optimum image is produced.

2
CH2

PRESET	POSITION
CH SELECT	ASIA/M. EAST
SYS SELECT	ACCESS
AUTO TUNE	ACCESS
MANUAL TUNE	ACCESS
SOUND SYS	5.5MHz
COLOUR SYS	AUTO
FINE TUNE	ACCESS
SKIP	OFF

The colour system will change as shown.

AUTO ↔ PAL ↔ SECAM
 ↑ ↓
 NTSC3.58 ↔ NTSC4.43
- 3**



Push the "PRE." (PRESET) Button 3 times.
(In the AV mode, push the "PRE." (PRESET) button once.)

This returns the set to the normal viewing condition.

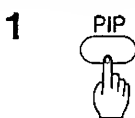
The selected Colour System is automatically memorised.

Note:

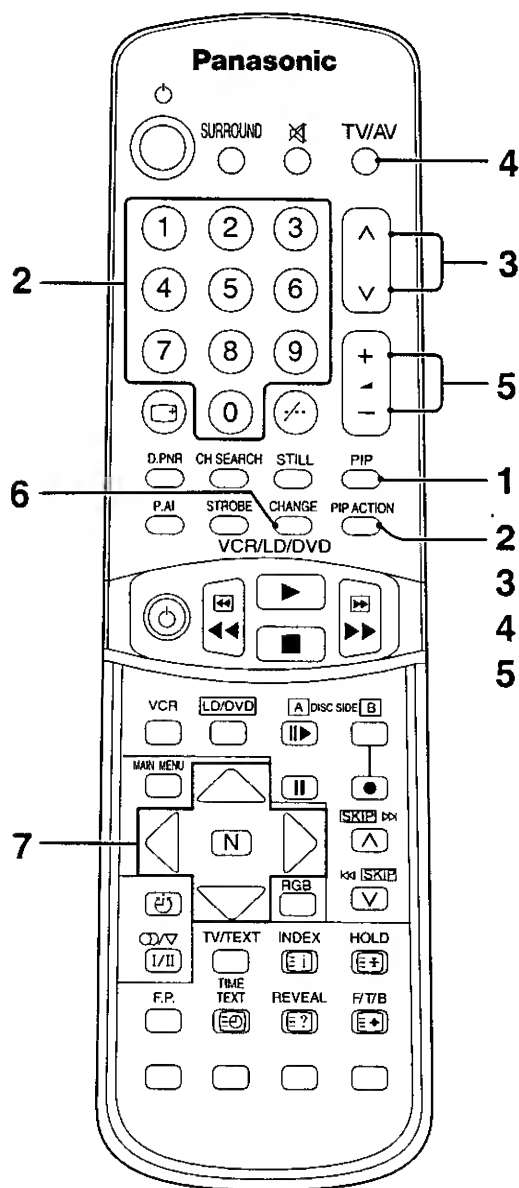
- (1) The Preset mode of DVD main picture (Y,P_B,P_R) is the setting for AV4.
- (2) PAL, SECAM and NTSC 3.58 are different colour signal broadcast transmission systems applicable to differing countries NTSC 4.43 is a trick playback mode used in special VCR's to playback NTSC recorded video tapes through PAL television equipment.

Advanced Remote Control Operation

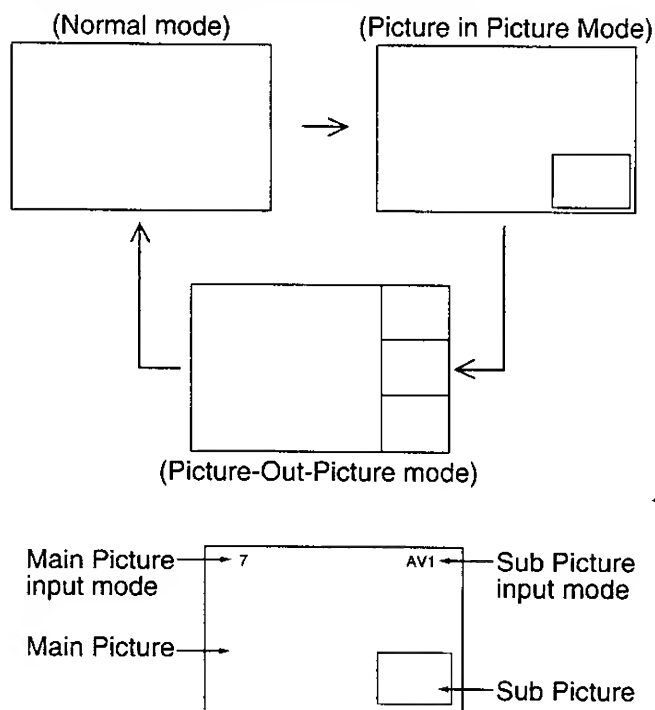
PICTURE IN PICTURE Operation (TC-29P100R is not equipped)



The TV broadcast signals and the external signals can be viewed simultaneously. By pushing the PIP button to view the following PIP conditions.



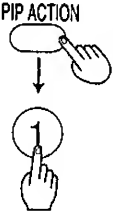
PIP condition is as shown below

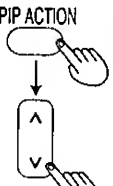


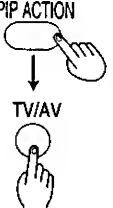
Note:

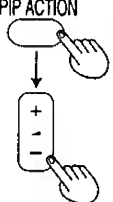
- (1) The DVD (Y,PB,PR) signal does not display a sub-picture.
- (2) When the set is in PIP mode, the left and right picture are processed by two different circuits. Therefore there may be a minor difference in clarity between the pictures.

Advanced Remote Control Operation

- 2 PIP ACTION**

Sub picture Direct Programme (Channel) Number Selection
 Push the "PIP ACTION" button and Direct programme Number Selection button to select the programme number during the Sub Picture input mode indication is blinking.


- 3 PIP ACTION**

Sub picture Programme Number Selection
 Push the "PIP ACTION" button and Programme Number Up "^" or Down "v" Button to select the next higher or lower programme number.

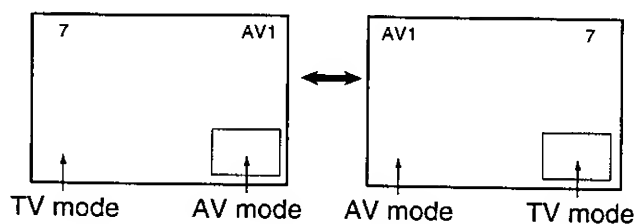
- 4 PIP ACTION**

Sub picture TV/AV Mode Selection
 Push the "PIP ACTION" button, and TV/ AV Button to select TV, AV1, AV2, AV3, AV4 input signal mode sequentially.

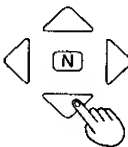
- 5 PIP ACTION**

Sub Headphones Volume adjustment
 Push the "PIP ACTION" button, and volume Up "+" or Down "-" Button to increase or decrease the sub Headphones volume level.

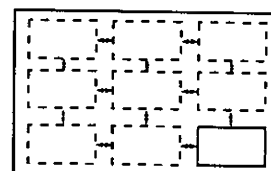
Note:

The volume for the main picture on sub-picture can be adjusted separately.

- 6 CHANGE**

CHANGE
 Push the "CHANGE" Button to SWAP from Main picture to sub picture and vice versa.



- 7**

Position Buttons (Only for PIP mode)
 By pushing each "Position" Button, you can select the 9 positions of the Sub Picture on the screen.

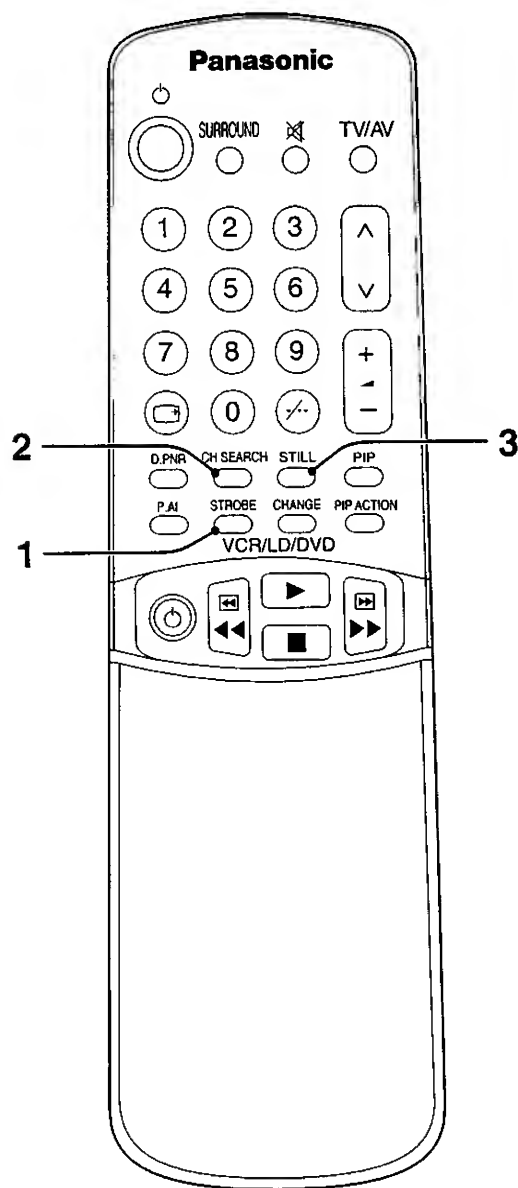


Note:

By pushing the Normal "N" Button while the picture in picture mode is activated, the Sub Picture position will move to the bottom Right corner.

Advanced Remote Control Operation

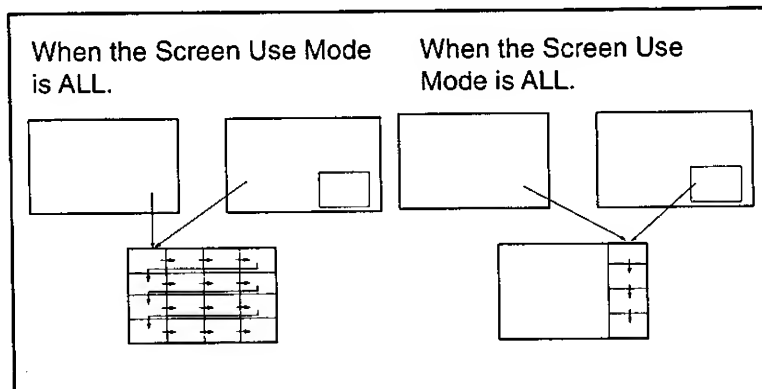
STROBE , CH SEARCH and STILL Operation



1



STROBE (TC-29P100R is not equipped)
 Push the "STROBE" button to display the sub-picture with a strobe effect.
 When the "STROBE" is on, push the "STROBE" button again to turn off the strobe, or push the "STILL" button to freeze the strobe image.
 Push the "STILL" button again to restart the strobe effect.



2



CH (Channel) SEARCH (TC-29P100R is not equipped)

By pushing this button, it is possible to search through all tuned programme numbers.
 Push the desired programme number.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

When the Screen Use Mode is ALL.

1
2
3
4

When the Screen Use Mode is PART.

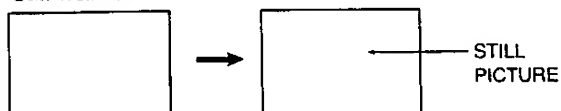
3



STILL Mode

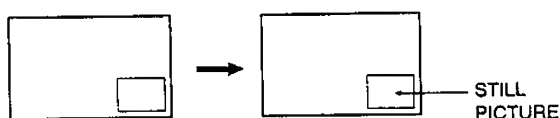
Normal Viewing Condition:

Push the Still button and the Main picture as a still frame.



PIP and POP Mode is ON:

Push the Still button to display the Sub picture as a still frame.



Advanced Remote Control Operation

P.AI and D.PNR Operation

1

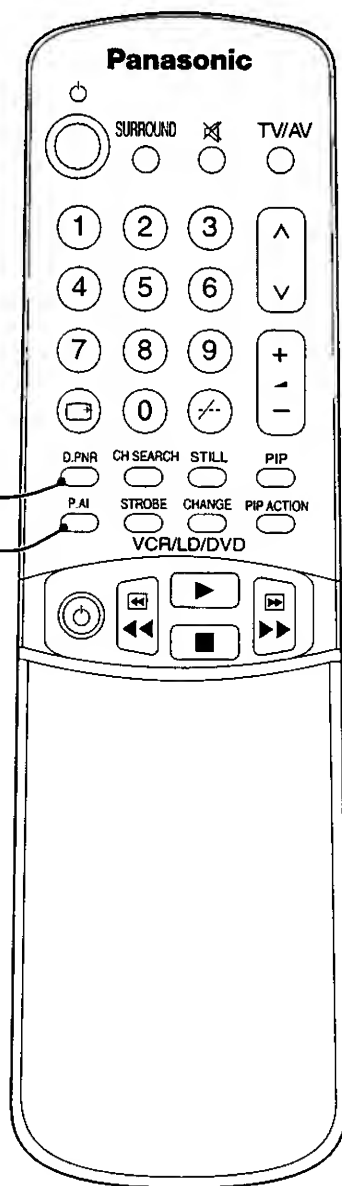


P-AI(Picture-Artificial Intellingence)

The P-AI continuously detects fine difference in the picture signal, with great precision, and including the picture brightness, black level and contrast. This function automatically adjusts the picture to the best quality for the scene, and reproduces images that provide a sense of depth.

2

1



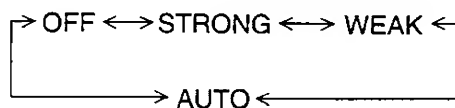
2



D.PNR

This Picture Noise Reduction System is designed to reduce picture noise during poor quality reception conditions.

The D.PNR Mode will change as shown.



Advanced Remote Control Operation

Surround Operation

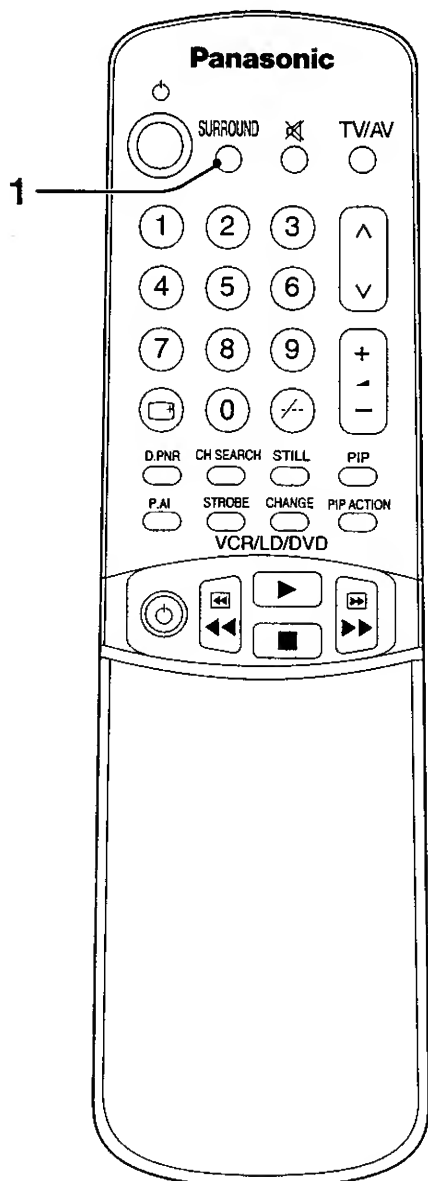
1 SURROUND



Surround Button

The benefits of surround sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.

The surround effect can be obtained without the use of external surround speakers.



On screen display during surround mode.

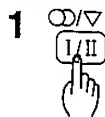
	Type of broadcast	On-screen display
TV Mode	• MONO (Including STEREO switched to MONO by you) and BILINGUAL	SURROUND MONO ↓ SURROUND OFF
	• STEREO	SURROUND STEREO ↓ SURROUND OFF
AV Mode	• Select the AV mode (AV1, AV2, AV3 and AV4)	SURROUND STEREO ↓ SURROUND MONO ↓ SURROUND OFF

Note:

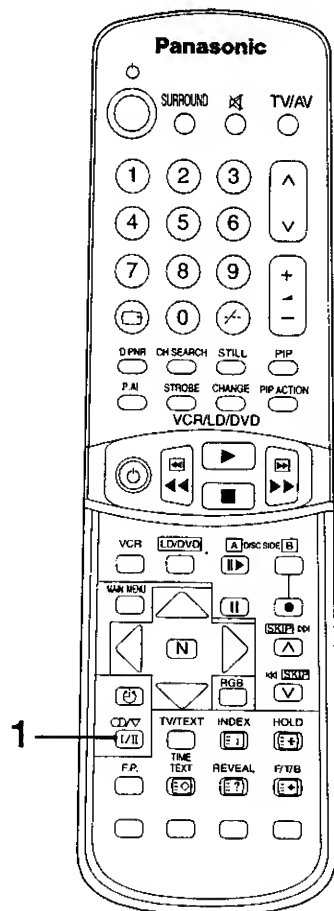
If the stereo signal is poor or the receiving conditions are not optimum or if STEREO: MONO automatic switching occurs, it is recommended that "STEREO" switch to MONO (Refer to page 43) be used. If problems or unusual sudden effects are encountered in any of the surround modes, it is recommended that "SURROUND OFF" be selected.

Advanced Remote Control Operation

Stereo Reception (TC-29P100R is not equipped)



When you receive the stereo/bilingual sound system, sound output modes can be selected by pushing the stereo/bilingual sound selection button.



Audio Signal	Mode Indicator
STEREO	⊕
MAIN I	I
SUB II	II
MONO	▽

	Type of broadcast	Mode Indicator
NICAM	Regular broadcast (Standard Audio)	No Indicator
	Regular + NICAM MONO I (MAIN I)	I ↔ ▽
	NICAM STEREO	⊕ ↔ ▽
	NICAM DUAL MONO (MAIN I / SUB II)	I → II ↑ ▽ ↓
A2 (German)	Regular broadcast (Standard Audio)	No Indicator
	BILINGUAL or DUAL MONO : MAIN I / SUB II	I ↔ II
	STEREO	⊕ ↔ ▽

Note:

(1) The "A2(German)" stereo/bilingual TV sound transmission system is used in the following countries; Australia, Malaysia, Thailand, Indonesia, etc.

The "NICAM" stereo TV sound transmission system is used in the following countries; New Zealand, Singapore, Hong Kong and China.

(2) If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.

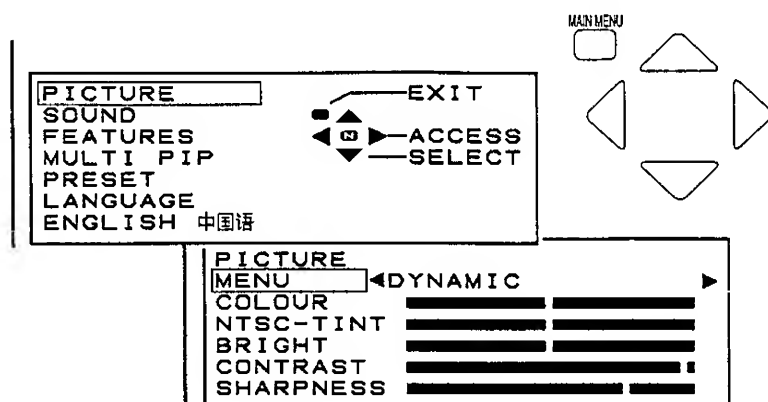
When the broadcasting mode changes to "STEREO" or "MONO" after you have selected "MONO" mode, change over to "STEREO" mode will be made automatically.

Note:

- (1) Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- (2) When the receiving conditions deteriorate, listening will be easier if the mode is set to the "MONO" position, using the stereo/bilingual sound selection button.
- (3) "DUAL", also known as "DUAL MONO" or as "BILINGUAL" is not currently transmitted in some countries.

Main Menu Operation

Picture Menu Operation



1. Push the "Main Menu" Button.
2. Select the "Picture" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "Picture" Menu by pushing the Position Left "◀" or Right "▶" Button.
3. Choose the option and adjust by pushing the Position Up "▲" or Down "▼" buttons, and by setting with the Position Left "◀" or Right "▶" buttons.

Picture Menu	Function
DYNAMIC	For viewing in brighter environments. This menu selects a higher than normal levels of Brightness and Contrast.
STANDARD	For viewing in normal (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.
SOFT	For viewing in a dark room. This menu selects reduced levels of Brightness and Contrast.

1. You can change the level of each Function (COLOUR, NTSC-TINT, BRIGHT, CONTRAST, SHARPNESS) for each picture Menu.
2. Picture menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

Item	Effect	Indicator
COLOUR	Less More	COLOUR 32
NTSC-TINT	Reddish Greenish	NTSC-TINT 32
BRIGHT	Darker Brighter	BRIGHT 32
CONTRAST	Less More	CONTRAST 32
SHARPNESS	Less More	SHARPNESS 32

Note:

- (1) When the TV is in Multi PIP mode and Picture-in-Picture mode, the main and sub pictures are both adjusted simultaneously.
- (2) Even if the TV is not set to "NTSC" mode, "NTSC-TINT" will be displayed and level adjustment would be possible. But it would not function.
- (3) When the RGB/TEXT mode, NTSC-TINT and SHARPNESS will not displayed.

Helpful Hint (N Normalization)

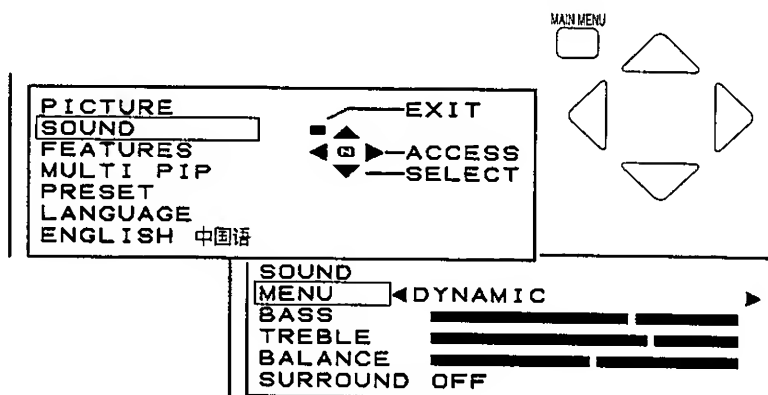
By pushing the Normal "N" Button on the Remote Control while the Picture menu is displayed, the selected menu will be changed to the Normal Mode.

Normalisation will not occur if the menu is not displayed when the "N" Button is pushed.

The Normal mode is the factory preset condition. Returning to this original condition is called "Normalisation".

Main Menu Operation

Sound Menu Operation



1. Push the "Main Menu" Button.
2. Select the "Sound" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "Sound" Menu by pushing the Position Left "<" or Right ">" Button.
3. Choose the option and adjust by pushing the Position Up "▲" or Down "▼" buttons, and by setting with the Position Left "<" or Right ">" buttons.

Sound Menu	Function
DYNAMIC	Amplifies the Low frequencies and outputs optimum sound. For music programmes for example.
STANDARD	For Normal use.
AUTO	Sound and Music signals are altered and the best sound is automatically adjusted: sound (e. g. News and Human voice, etc.) is adjusted so as to be easy to hear and music is adjusted to give background impression.

1. You can change the level of each Function (BASS, TREBLE) for each Sound Menu.
2. Sound menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

Item	Effect	Indicator
BASS	Less More	BASS 32
TREBLE	Less More	TREBLE 32
BALANCE	Left SP. Right SP.	BALANCE 32

Note:

- (1) When set to Multi PIP mode and Picture-in-Picture mode, the main and sub sound are both adjusted simultaneously.
- (2) When SOUND AUTO mode is selected in Sound Menu Operation, BASS and TREBLE can not be adjusted.

Helpful Hint (N Normalization)

By pushing the Normal "N" Button on the Remote Control while the Sound menu is displayed, the selected menu will be changed to the Normal Mode.

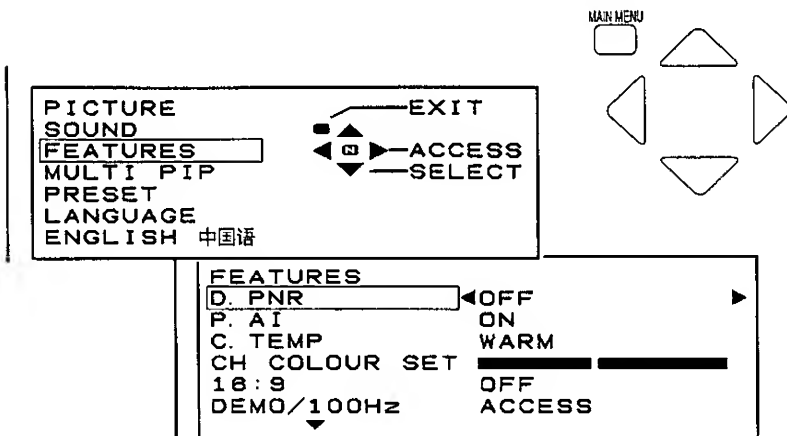
Normalisation will not occur if the menu is not displayed when the "N" Button is pushed.

The Normal mode is the factory preset condition. Returning to this original condition is called "Normalisation".

Main Menu Operation

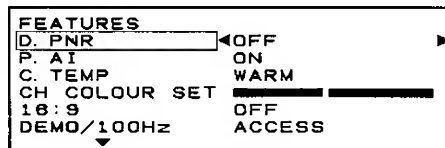
Features Menu Operation

1. Push the "Main Menu" Button.
2. Select the "FEATURES" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "Features" Menu by pushing the Position Left "◀" or Right "▶" Button.
3. Choose the option and adjust by pushing the Position Left "◀" or Right "▶" buttons, and by setting with the Position Left "◀" or Right "▶" buttons.



D.PNR (Picture Noise Reduction) Mode (No indication in RGB input mode)

This Picture Noise Reduction System is designed to reduce picture noise during poor quality reception conditions.

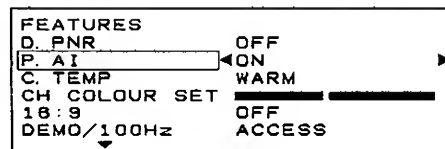


P.AI Mode

(No indication in RGB input mode)

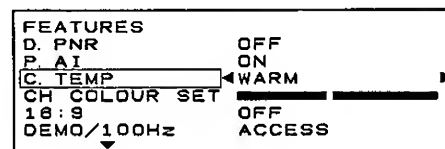
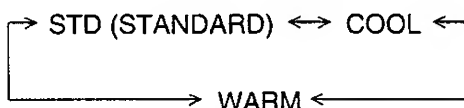
The P.AI continuously detects fine differences in the picture signal, with great precision, and including the picture brightness, black level and contrast.

This function Automatically adjusts the picture to the best quality for the scene, and reproduces images that provide a sense of depth.



C.TEMP (Colour Temperature) Mode


The C.TEMP (Colour Temperature = classifying white light) will change as follows.



Main Menu Operation


CH COLOUR SET Mode (No indication in RGB input mode)

Colour density varying between broadcast channels can be adjusted to three levels for each reception channel.

FEATURES	
D. PNR	OFF
P. AI	ON
C. TEMP	WARM
CH COLOUR SET	
16:9	OFF
DEMO/100Hz	ACCESS

16:9 Mode (No indication in RGB input mode)

When the 16:9 mode is ON, the screen ratio becomes 16:9.

FEATURES	
D. PNR	OFF
P. AI	ON
C. TEMP	WARM
CH COLOUR SET	
16:9	OFF
DEMO/100Hz	ACCESS

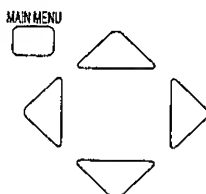
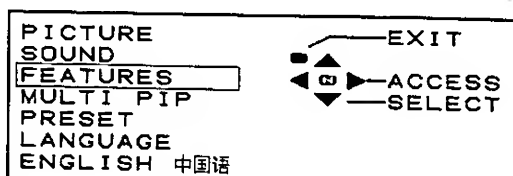
DEMO/100Hz Mode (No indication in RGB / TEXT mode)

Demonstrates the 100Hz Super Digital Scan System and the 50Hz Scan System. (When the NTSC signal is received, this Mode is not displayed.)

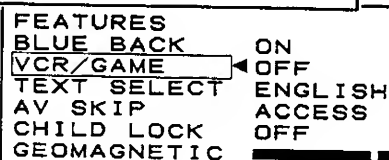
100Hz	50Hz
-------	------

Main Menu Operation

Features Menu Operation

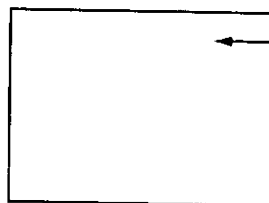


1. Push the "Main Menu" Button.
2. Select the "FEATURES" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "FEATURES" Menu by pushing the Position Left "◀" or Right "▶" Button.
3. Choose the option and adjust by pushing the Position Up "▲" or Down "▼" buttons, and by setting with the Position Left "◀" or Right "▶" buttons.



BLUE BACK Mode

When no picture signal is received, or the signal is weak, the screen reverts to a blue background colour and the Sound is muted. Disable this Feature to continue watching very weak signals.



Blue if no input picture signal or input signal is weak

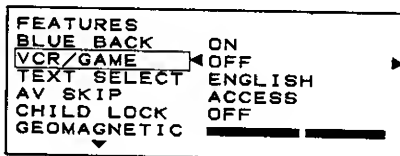
Note:

If BLUE BACK Mode is set on while a VCR signal is being viewed, selecting CUE or REVIEW may cause the screen to revert to the blue background colour. Disable this Feature to view correctly.

VCR/GAME Mode

(No indication in RGB input mode)

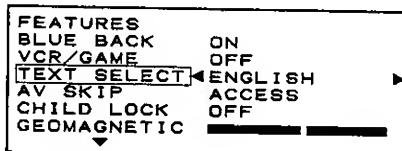
Reproduction of irregular signals, such as certain TV games and rental video tapes, may be improved.



TEXT Select Mode

(No indication for TC-29P100G, TC-29P100H, TC-29P100R, TC-33P100G, TC-33P100H)

The viewer can select from the following four text languages. Please select the option matching the text signal being received.



Display	Language
ENGLISH	English
CIS	Russian, Estonian, Lithuanian, Ukrain,
E.EUROPE	Polish, Czech, Serbiasn, Rumanian

Main Menu Operation

AV Skip Mode

(No indication in RGB input mode)

When the AV Skip Mode is set on, this step is skipped at the time of selection with the TV/AV , or TV/AV/RGB button.

FEATURES	
BLUE BACK	ON
VCR/GAME	OFF
TEXT SELECT	ENGLISH
AV SKIP	ACCESS
CHILD LOCK	OFF
GEOMAGNETIC	OFF

CHILD LOCK Mode

(No indication in RGB / TEXT input mode)

If the Child-Lock function is set ON, picture and sound of the TV/AV mode being viewed will disappear and a Blue -Back screen will appear.

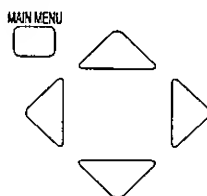
FEATURES	
BLUE BACK	ON
VCR/GAME	OFF
TEXT SELECT	ENGLISH
AV SKIP	ACCESS
CHILD LOCK	OFF
GEOMAGNETIC	OFF

GEOMAGNETIC Mode

Refer to page 11.

Language Menu Operation

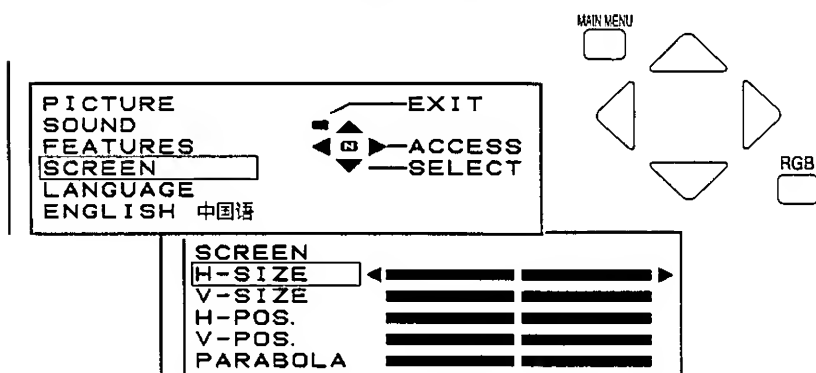
PICTURE	
SOUND	
FEATURES	
MULTI PIP	
PRESET	
LANGUAGE	
ENGLISH 中国語	



1. Push the "Main Menu" Button.
2. Select the "Language" Menu by pushing the Position Up "▲" or Down "▼" Button.
3. Push the Position Left "◀" or Right "▶" Button. The on-screen language display will change.

Main Menu Operation

SCREEN Menu Option

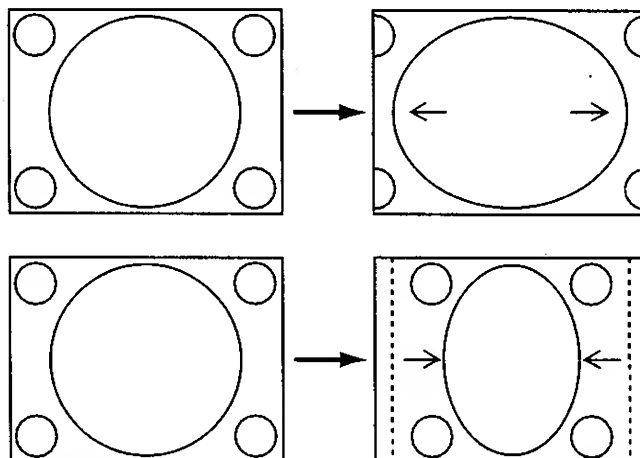


1. Push the "RGB" button on the Remote Control to select the RGB mode.
2. Push the "Main Menu" Button.
3. Select the "SCREEN" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "SCREEN" Menu by pushing the Position Left "◀" or Right "▶" Button.
4. Choose the option and adjust by pushing the Position Up "▲" or Down "▼" buttons, and by setting with the Position Left "◀" or Right "▶" buttons.

H-SIZE Mode

Push the Position Right "▶" button to adjust the H-SIZE.

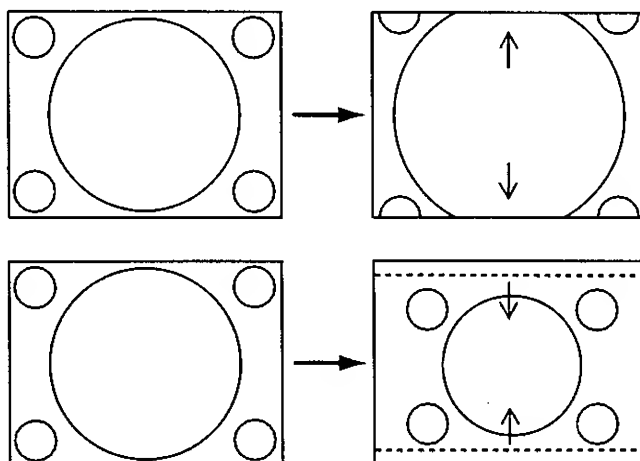
Push the Position Left "◀" button to adjust the H-SIZE.



V-SIZE Mode

Push the Position Right "▶" button to adjust the V-SIZE.

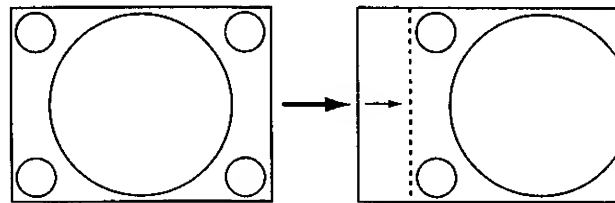
Push the Position Left "◀" button to adjust the V-SIZE.



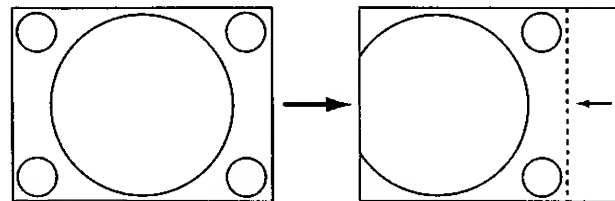
Main Menu Operation

H-POS Mode

Push the Position Right ">" button to shift the image right.

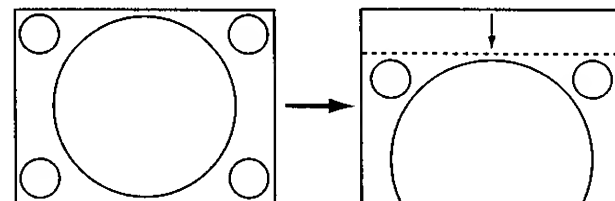


Push the Position Left "<" button to shift the image left.

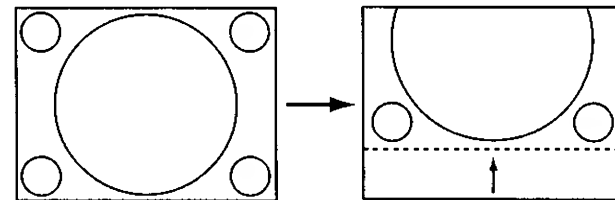


V-POS Mode

Push the Position Right ">" button to shift the image down.

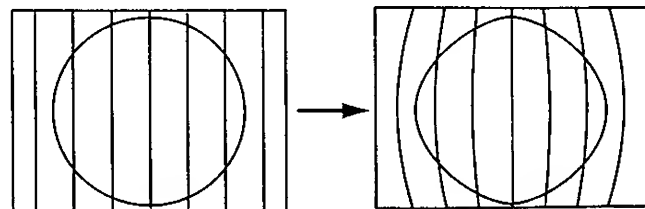


Push the Position Left "<" button to shift the image up.

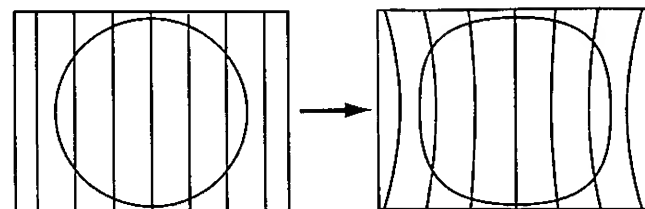


PARABOLA Mode

Push the Position Right ">" button to extended the top and the bottom of the image.

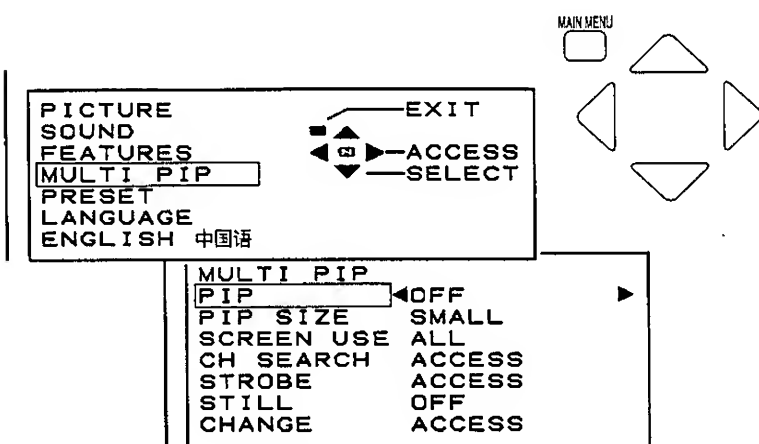


Push the Position Left "<" button to shrink the top and the bottom of the image.



Main Menu Operation

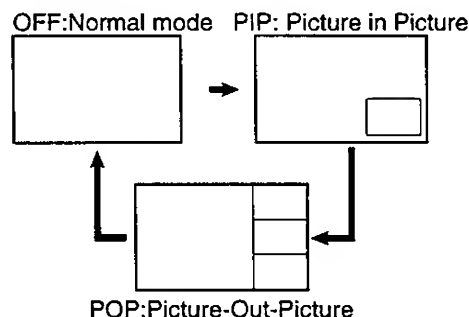
Multi PIP Menu Operation



1. Push the "Main Menu" Button.
2. Select the "Multi PIP" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "Multi PIP" Menu by pushing the Position Left "<" or Right ">" Button.
3. Choose the option and adjust by pushing the Position Up "▲" or Down "▼" buttons, and by setting with the Position Left "<" or Right ">" buttons.

PIP Mode

Select the PIP Mode or POP Mode.

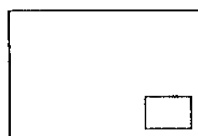


PIP SIZE Mode

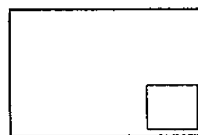
This feature allows the user to change the sub picture size in PIP mode.

SMALL 1/16 size of the main picture

LARGE 1/9 size of the main picture



When the PIP size Mode is SMALL:



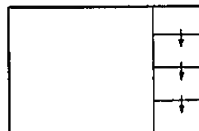
When the PIP size Mode is LARGE:

SCREEN USE Mode

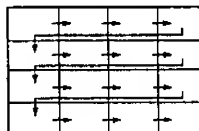
When using the strobe or channel search functions, select whether these features are to apply to the full screen, or to the sub-screen.

PART Sub screen strobe/channel search

ALL Main screen strobe/channel search



When the Screen Use Mode is PART:

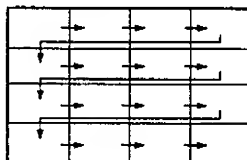


When the Screen Use Mode is ALL:

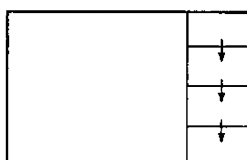
Mains Menu Operation

CH (Channel) SEARCH Mode

When the CH SEARCH mode is ON, it is possible to search through all tuned programme numbers, Push the desired programme numbers.



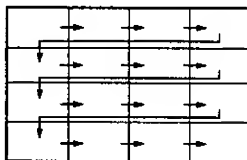
When the Screen Use Mode is ALL:



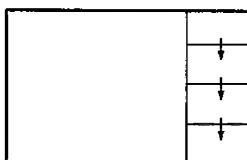
When the Screen Use Mode is PART:

STROBE Mode

When the STROBE mode is ON, to display the sub-picture with a strobe effect.



When the Screen Use Mode is ALL:

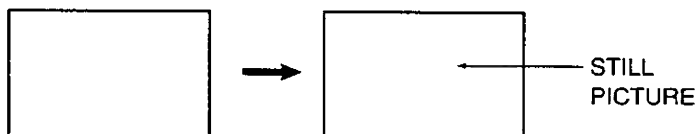


When the Screen Use Mode is PART:

STILL Mode

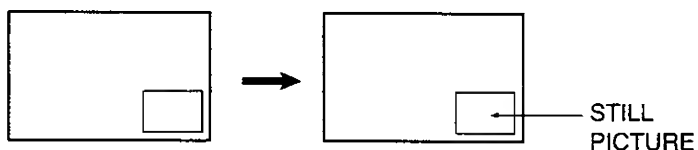
Normal Viewing Condition:

STILL Mode on and the Main picture as a still frame



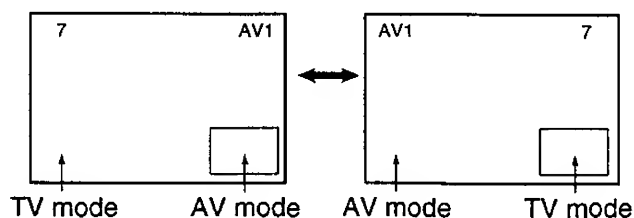
PIP and POP Mode is ON:

STILL Mode on to display the sub picture as a still frame



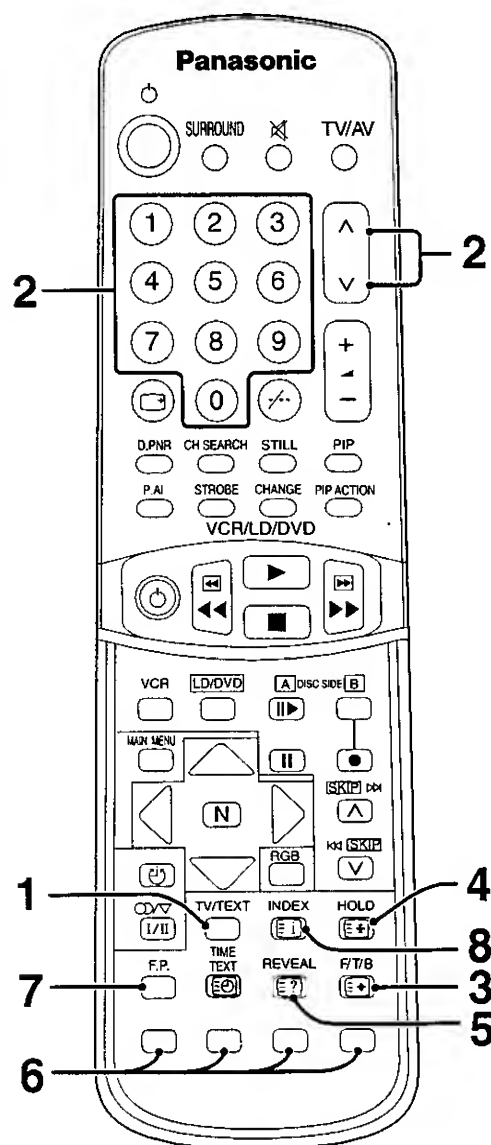
CHANGE Mode

When the CHANGE Mode is ON to Swap from Main picture to sub picture and vice versa.



Teletext Operation

(For TX-29/33P100 Series, TX-68/79P100 Series)



- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- When in teletext mode, the volume may still be altered to the desired listening level.

What is LIST mode?

In LIST mode, four different coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory.

What is FASTEXT?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, push the appropriately coloured button. This facility enables fast access to information of the subjects shown.


What are the advantages?

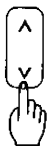
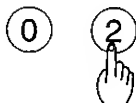



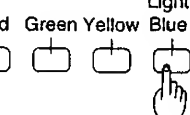


- Page selection at the touch of a Colour-coded Button.
- Easy to use step-by-step selection of the topics subject.
- Reduction of waiting time.
- Page status line at bottom of screen so you always know which Button will take you to the desired information.

Note:

Characters will be illegible unless you select the Text Language which matches the text being received.
Select the correct Text Language (Refer to page 48).

Teletext Operation

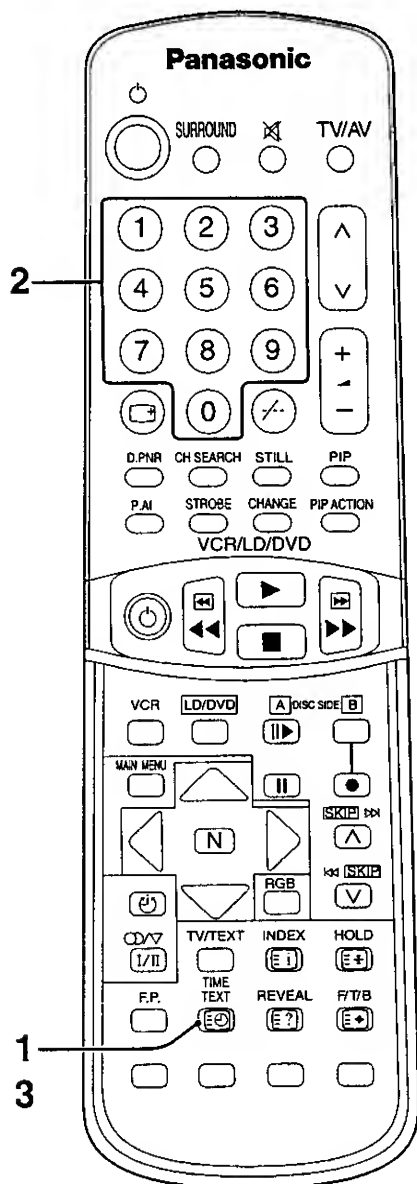
- 1 TV/Teletext mode**
 By pushing the "TV/TEXT" Button, to change the TV/Teletext mode as follows.

TV ↔ TEXT
- 2 Page Selection**
Pages can be selected in two ways:
a) Push the Up/Down Buttons to increase or decrease the page number by one.

b) By entering the page number, using 0-9 on the remote control.

- 3 Full/Top/Bottom**
 Push to expand the Top half of the page. Push again to expand the Bottom half. Push again to return to normal (FULL) size.
- 4 Hold**
 Push to hold the current page. Push again to cancel the hold.
- 5 Reveal**
 Push to reveal hidden words e.g. quiz page answers. Push again to hide.
- 6 Colour-Coded Buttons**
 In FASTEXT mode these correspond to the differently coloured subjects.
In LIST mode they correspond to the differently coloured page numbers.
- 7 Favourite Page (F.P.)**
 Stores a favourite page in memory for instant recall. To store such a page, the TV must be in LIST mode, push the Light BLUE Button, select the page number, then push List Store. The page number is now stored. Push F.P. to recall this page.
- 8 Index**
 Push INDEX to return to the main index page.

Teletext Operation

Sub Coded Page Access

The TEXT Menu will be displayed in TEXT mode. When teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require. It is possible to enter your required sub page and continue watching the normal programme until the correct sub page is found. Select the required page number using Buttons 0-9.

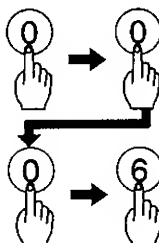


1



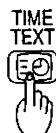
Push the TIME TEXT button.

2



Enter desired sub page number.
To select page 6 enter 0,0,0 and 6.

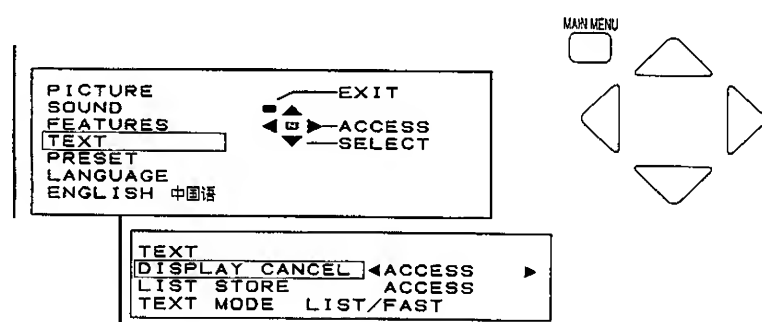
3



Push the TIME TEXT button.

Teletext Operation

TEXT Menu Operation



1. Push the "TV/TEXT" button on the Remote Control to select the TEXT mode.
2. Push the "Main Menu" Button.
3. Select the "TEXT" Menu by pushing the Position Up "▲" or Down "▼" Button and Access the "TEXT" Menu by pushing the Position Left "<" or Right ">" Button.
4. Choose the option and adjust by pushing the Position Left "<" or Right ">" buttons, and by setting with the Position Left "<" or Right ">" buttons.

DISPLAY CANCEL

Push the Position Left "<" or Right ">" button to view the TV picture whilst searching for a Teletext page. When found, the screen will display the page number at the top left.

News Flash

When a news flash page has been selected, push Position Left "<" or Right ">" button to view the TV picture, when an update is received, it will be displayed on screen.

Update

Push Position Left "<" or Right ">" button to see the update of information on certain pages. When an update is received, the page number will be displayed at the top left of the screen.

LIST STORE

In LIST mode the four page numbers can be altered for channel position. To do this, push one of the colour coded buttons and enter the new page number.

Push and hold List store, the page number will change colour.

TEXT MODE

Push to change from FASTEXT mode to LIST mode and vice versa.

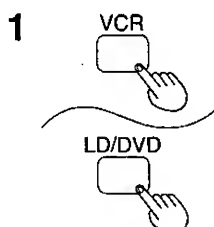
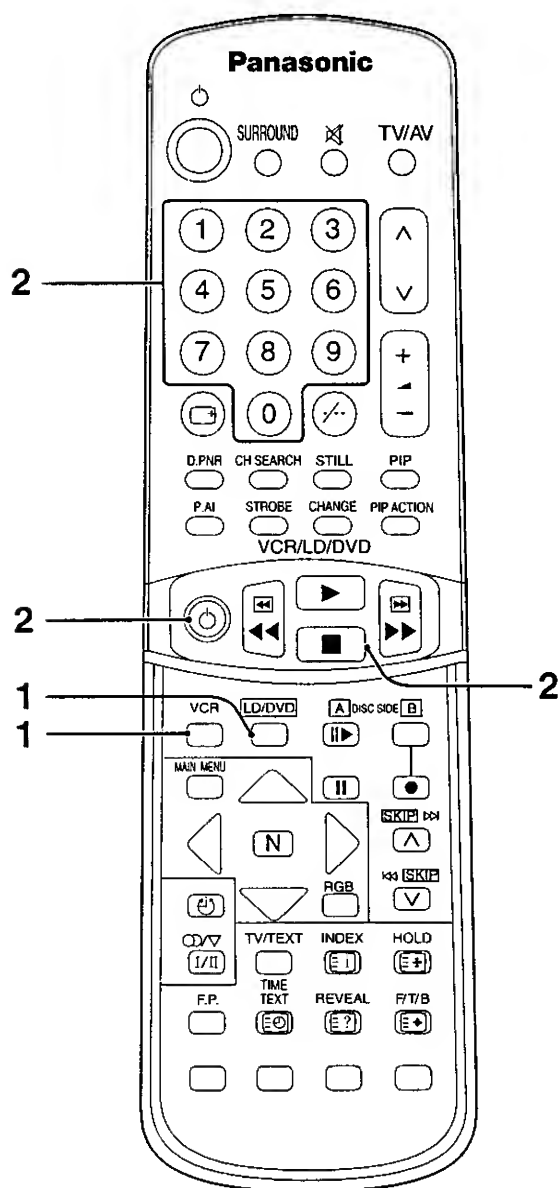
In FASTEXT mode four differently coloured subjects are displayed at the bottom of the page. Push the appropriate coloured Button to access more information about one of these subjects.

Operation of the VCR/LD/DVD

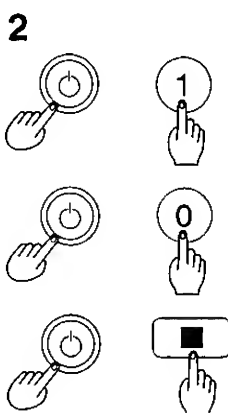
Manufacturer setting

Remote Control Operation is possible for the VCR's, LD's and DVD's of the various manufacturers.

After completion of setting, execute the various operations after pushing the VCR or the LD/DVD button.



1 Push the button of the unit to be set (VCR or LD/DVD) .



2 While pushing the VCR/LD/DVD Power button, push the manufacturer code setting (enter the two digit code), and push the VCR/ LD/DVD Stop button.

VCR

Manufacturer	Code	Manufacturer	Code
Panasonic/ National	10,11,12,13	NEC	40,41,42,43
AIWA	15,16	ORION	45,46
FUJITSU	20	PHILIPS	50
HITACHI	25,26,27	SANYO	55,56,57,58
JVC	30,31,32	SHARP	60,61
mitsubishi	35,36	SONY	65,66,67
		TOSHIBA	70,71

LD

Manufacturer	Code	Manufacturer	Code
Panasonic	10,11,12,13	SAMSUNG	30
KENWOOD	15,16	SHARP	35
PHILIPS	20	SONY	40,41,42,43
PIONEER	25		

DVD

Manufacturer	Code
Panasonic	70

NOTE:

After setting, execute operation confirmation.

If there is no operation, set a different code.

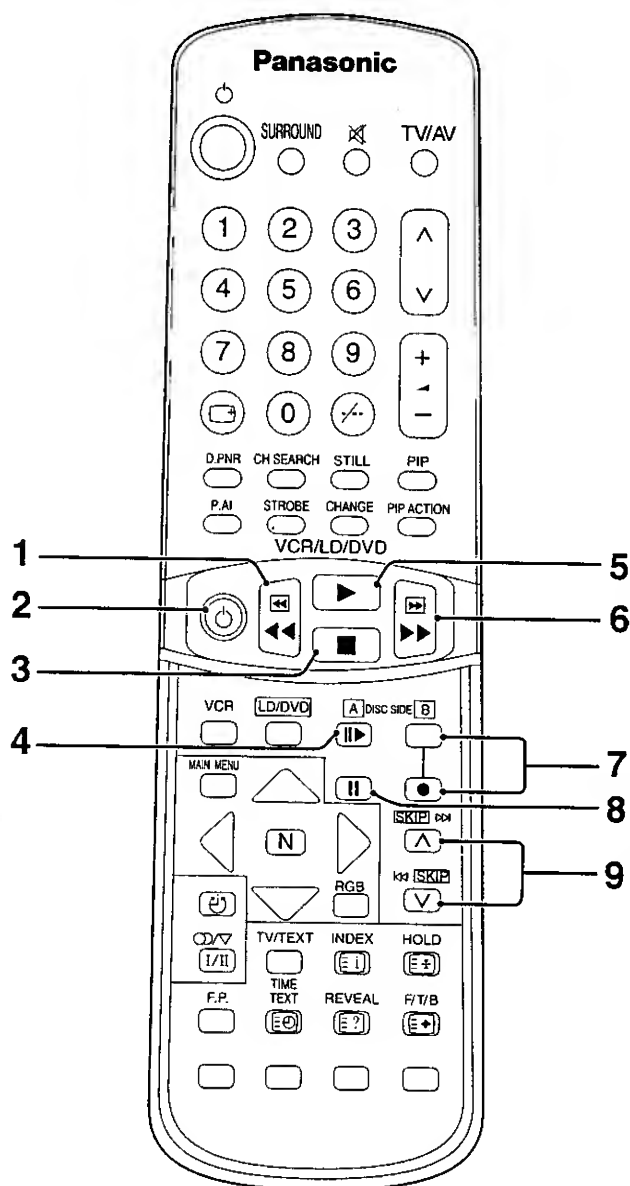




















Helpful Hint

- (1) The respective VCR/LD/DVD manufacturer code is cancelled when battery has been exchanged. please set it again.
- (2) Depending on the model, operation of VCR's, LD's or DVD's of the manufacturers listed above may not be possible.
- (3) In some cases, new products may not be operative.
- (4) It will not operate with other than the above manufactures.

Operation of the VCR/LD/DVD



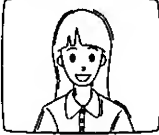
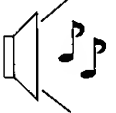
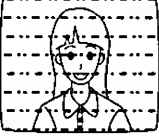
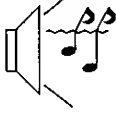

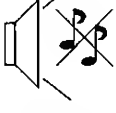




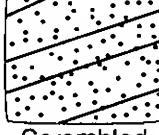
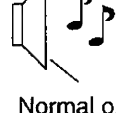

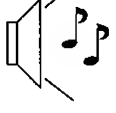

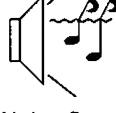
Execute the various operations after pushing the VCR or LD/DVD button.



Button	Function	
	VCR	LD/DVD
1		
2		
3		
4		
5		
6		
7		
8		
9		

Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
 Snowy Picture	 Noisy Sound	Aerial Location, direction or Connections
 Multiple Image	 Normal Sound	Aerial Location, direction or Connections
 Interference	 Noisy Sound	Electrical Appliances Cars/Motorcycles Fluorescent Lamps
 Normal Picture	 No Sound	Volume (Check whether the mute function has been activated on the Remote Control.)
 No Picture	 No Sound	Not plugged into AC outlet Not switched on Contrast and Brightness/Volume setting (Check by pushing the Power Switch or Stand-by Button on the Remote Control.)
 No Colour	 Normal Sound	Colour Control
 Scrambled	 Normal or Weak Sound	Retune Channels
 Coloured Patches	 Normal Sound	Magnetic interference from unshielded equipment TV set moved while "ON" Turn the TV set off for 30 mins, using the "Power" Switch on the TV set.
 No Colour	 Noisy Sound	Sound System (Refer to page 36) Colour System (Refer to page 37)

Specifications

Power Source	TX-29P100X, TX-33P100X AC Auto 110-240 V, 50/60 Hz TX-68P100Z, TX-79P100Z AC Auto 230-240 V, 50 Hz	TC-29P100G, TC-29P100R TC-29P100H(only 50 Hz), TC-33P100G, TC-33P100H(only 50 Hz) AC 220 V, 50/60 Hz																																																
Power Consumption	TX-68P100Z, TX-29P100X TC-29P100G/H/R 191W Stand-by condition 0.7 W	TX-79P100Z, TX-33P100X TC-33P100G/H 219W Stand-by condition 0.7 W																																																
Receiving System	<table><tr><th colspan="2">21 Systems</th><th>Function</th></tr><tr><td>1</td><td>PAL B,G,H</td><td rowspan="7">Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders</td></tr><tr><td>2</td><td>PAL I</td></tr><tr><td>3</td><td>PAL D,K</td></tr><tr><td>4</td><td>SECAM B,G</td></tr><tr><td>5</td><td>SECAM D,K</td></tr><tr><td>6</td><td>SECAM K1</td></tr><tr><td>7</td><td>NTSC M (NTSC 3.58/4.5 MHz)</td></tr><tr><td>8</td><td>NTSC 4.43/5.5 MHz</td><td rowspan="7">Playback from Special VCR's</td></tr><tr><td>9</td><td>NTSC 4.43/6.0 MHz</td></tr><tr><td>10</td><td>NTSC 4.43/6.5 MHz</td></tr><tr><td>11</td><td>NTSC 3.58/5.5 MHz</td></tr><tr><td>12</td><td>NTSC 3.58/6.0 MHz</td></tr><tr><td>13</td><td>NTSC 3.58/6.5 MHz</td></tr><tr><td>14</td><td>SECAM I</td></tr><tr><td>15</td><td>PAL 60 Hz/5.5 MHz</td><td rowspan="7">Playback from Special Disc Players and Special VCR's</td></tr><tr><td>16</td><td>PAL 60 Hz/6.0 MHz</td></tr><tr><td>17</td><td>PAL 60 Hz/6.5 MHz</td></tr><tr><td>18</td><td>SECAM 60 Hz/5.5 MHz</td></tr><tr><td>19</td><td>SECAM 60 Hz/6.0 MHz</td></tr><tr><td>20</td><td>SECAM 60 Hz/6.5 MHz</td></tr><tr><td>21</td><td>NTSC 50 Hz/4.5 MHz</td></tr></table>		21 Systems		Function	1	PAL B,G,H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders	2	PAL I	3	PAL D,K	4	SECAM B,G	5	SECAM D,K	6	SECAM K1	7	NTSC M (NTSC 3.58/4.5 MHz)	8	NTSC 4.43/5.5 MHz	Playback from Special VCR's	9	NTSC 4.43/6.0 MHz	10	NTSC 4.43/6.5 MHz	11	NTSC 3.58/5.5 MHz	12	NTSC 3.58/6.0 MHz	13	NTSC 3.58/6.5 MHz	14	SECAM I	15	PAL 60 Hz/5.5 MHz	Playback from Special Disc Players and Special VCR's	16	PAL 60 Hz/6.0 MHz	17	PAL 60 Hz/6.5 MHz	18	SECAM 60 Hz/5.5 MHz	19	SECAM 60 Hz/6.0 MHz	20	SECAM 60 Hz/6.5 MHz	21	NTSC 50 Hz/4.5 MHz
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Receiving Channels	<div>Regular TV</div> <div>VHF BAND 2-12 (PAL/SECAM B,K1) 0-12 (PAL B AUST.) 1-9 (PAL B N.Z) 1-12 (PAL/SECAM D) 1-12 (NTSC M Japan) 2-13 (NTSC M U.S.A)</div> <div>CATV S1-S20 (OSCAR) 1-125 (U.S.A CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A,9A (AUST.)</div> <div>UHF BAND 21-69 (PAL G,H,I/SECAM G,K,K1) 28-69 (PAL B AUST.) 13-57 (PAL D,K) 13-62 (NTSC M Japan) 14-69 (NTSC M U.S.A)</div>																																																	
Receiving Stereo System	NICAM I , NICAM B/G, NICAM D, A2 (German) (TC-29P100R is not equipped)																																																	

Specifications

Tuning System	Frequency synthesizer Auto Search Tuning POS (Position) : 100 Position DIRECT : 125 Position		
Picture Tube	TX-68P100Z, TX-29P100X TC-29P100G/H/R TX-79P100Z, TX-33P100X TC-33P100G/H Overall Picture tube measured diagonally 73 cm 85 cm Viewable Picture tube measured diagonally 68 cm 79 cm CRT Deflection 104° 104°		
Audio Output	40 W [17 W + 17 W + 6 W (Centre Speaker)]		
Headphones	3.5 mm Plug		
Aerial Impedance	75 Ω Unbalanced coaxial		
Video/Audio Terminals	AV 1,2,3,4 S-Video In Y:1 Vp-p,75 Ω C:0.3 Vp-p,75 Ω DVD(Y/P _B /P _R) Video In 1 Vp-p,75 Ω Audio In Approx. 0.4V 47K Ω Monitor Out Video Out 1 Vp-p,75 Ω Audio Out Approx. 0.4V 1K Ω AV1 IN(Rear) : S-Video, Video, Audio L/R terminals AV2 IN(Front) : S-Video, Video, Audio L/R RGB terminals AV3 IN(Rear) : Video, Audio L/R terminals AV4 IN(Rear) : Video or Y/P _B /P _R , Audio L/R terminals		
Accessories Supplied	Remote control Transmitter TNQE158 TX-29P100X, TX-68P100Z, TX-33P100X, TX-79P100Z TNQE162 TC-29P100G, TC-29P100H, TC-33P100G, TC-33P100H R6 (AA) Battery × 2 75 Ω coaxial aerial plug TNQE183 TC -29P100R		
Optional Auessories	TX-68P100Z, TX-29P100X TC-29P100G/H/R TX-79P100Z, TX-33P100X TC-33P100G/H Set Stand TY-S29P100 TY-S33P100		
Dimensions (W × D × H)	TX-68P100Z, TX-29P100X TC-29P100G/H/R 688 mm × 492 mm × 570 mm TX-79P100Z, TX-33P100X TC-33P100G/H 790 mm × 555 mm × 653 mm		
Weight (Mass)	TX-68P100Z, TX-29P100X TC-29P100G/H/R 51.0 kg (Net) TX-79P100Z, TX-33P100X TC-33P100G/H 71.0 kg (Net)		

Note:

Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

Customer's Record

The model number and serial number of this product can be found on its cover. You should note this serial number in the space provided below and retain this book plus your purchase receipt as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

Matsushita Electric Industrial Co., Ltd.

Central P.O. Box 288, Osaka 530-8692, Japan

Printed in Japan
S1098S0(MS)